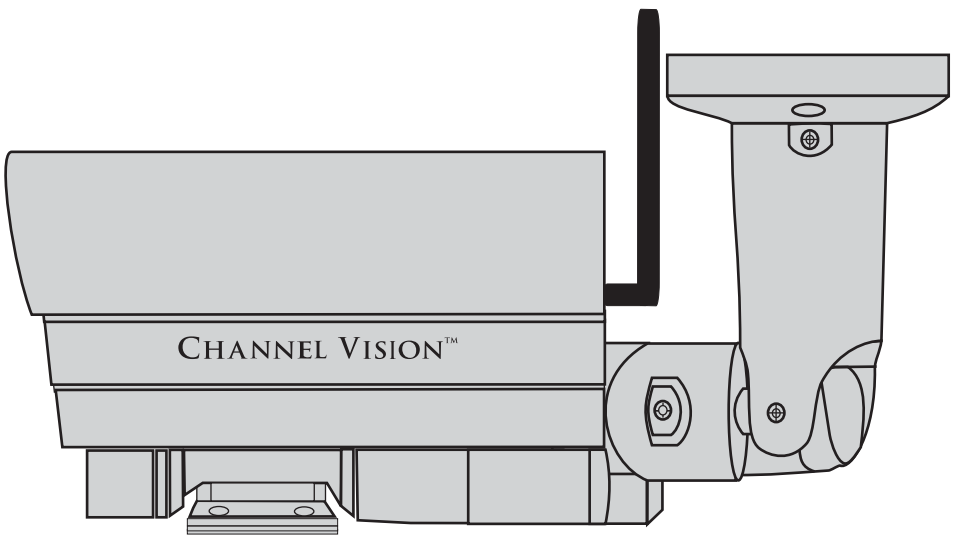
INSTRUCTIONS



6544

1.3 Megapixel Bullet Wireless IP Camera w/35 IR Illuminators

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Model 6544

The 6544 is a 1.3 Megapixel Bullet Wireless IP Camera w/35 IR Illuminators

Built-in web server allows users to view high quality, real-time video with Internet Explorer browser.

Multi-Stream H.264, MJPEG and MPEG

Live video can be recorded to a NVR and played back remotely, as well as viewed from many mobile phones and other devices.

Designed for large commercial projects with 100's of cameras or a single family house requiring a camera at the front door.

Wireless connectivity, using WEP, WPA-PSK, and WPA2-PSK

Hidden cable through the mount

Android & iPhone app

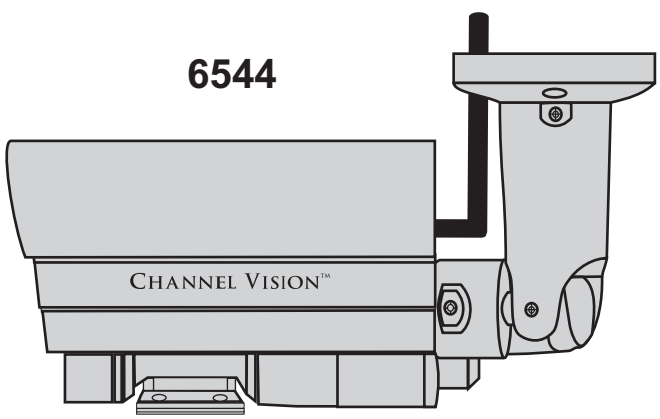
Adjustable Varifocal Lens 3.3-12mm

Alarm Trigger input and N.O. or N.C. switch on relay output

36 Camera CMS (Central Management) which will allow you to see all of your cameras anywhere in the world in multiple locations at the same time

6544 Features:

Channel Vision's 6544 IP Bullet camera offers superior image quality with a 1.3 megapixel CMOS sensor and has the ability to capture images up to 1280 x 800 pixels.
With H.264 compression, less bandwidth and storage space are used, while delivering full resolution at max frame rate with faster speeds over the internet.
The 6544 also features event triggered motion recording, as well as 35 IR LED for a viewing distance of 60 feet in total darkness. Monitoring can be done anywhere an internet connection is available even from a Smart-phone. The 6544 also features wireless communication using WEP, WPA-PSK, and WPA2-PSK.



Safety Warnings

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.

2. Keep these instructions for future reference.

3. Heed all warnings.

4. Follow all instructions.

5. Clean only with a dry cloth.

6. Install in accordance with these instructions.

7 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.

8. Do not defeat the safety purpose of the polarized-type plug. A polarized plug has two blades with one wider than the other. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point of exit from the apparatus.

10. Only use attachments/accessories specified by Channel Vision.

11. Unplug this apparatus during lightning storms or when unused for long periods of time.

12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the inside of the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

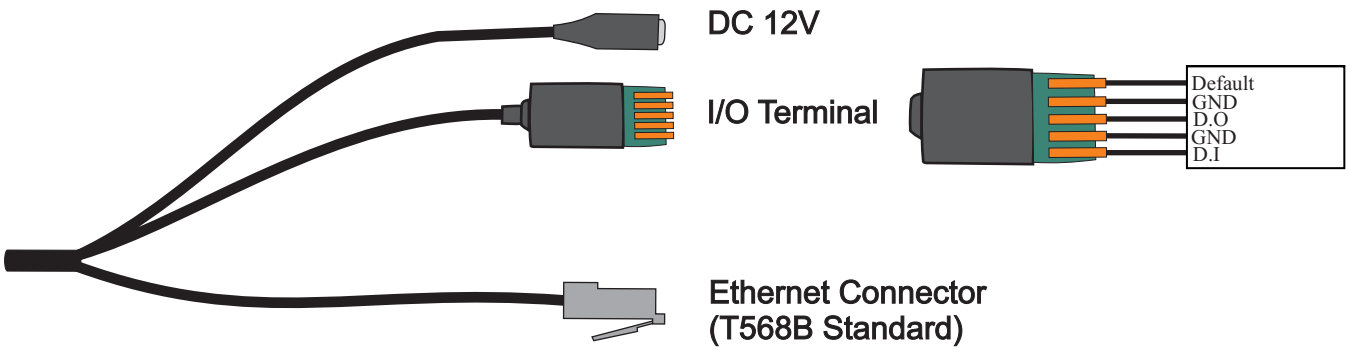
13. The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

14. The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance accompanying the appliance.

15. Inside of apparatus shall not be exposed to dripping or splashing and objects filled with liquids.

CAUTION: To reduce the risk of electric shock, do not remove the cover (or back). There are no user-serviceable parts inside, refer servicing to qualified service personnel.

Cable Pin Out



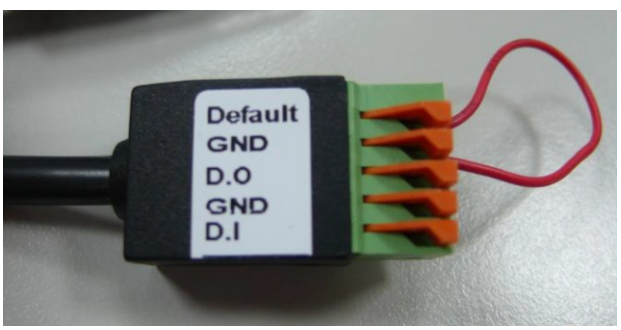
WARNING
DO NOT CUT THE BREAKOUT CABLE.
CUTTING THE CABLE WILL VOID THE WARRANTY ON THE DEVICE.

The breakout cable on Channel Vision's IP Cameras are used for motion detection, event triggering, alarm notifications etc.
The provided interface connections are explained below.

1. Digital Input (GND+DI):
An alarm input for connecting devices that can toggle between an open and closed circuit, for example PIRs, door/window contacts, broken glass detectors, etc. When a signal is received, the state changes and the input becomes active.

2. Relay output (GND+DO)
A selectable output for a relay switch, for example LEDs, Sirens, etc.
Normally Open and Normally Closed can be selected via the Internet Explorer ActiveX control under the "I/O Setting" section on the left.

3. Reset to factory default
To restore your IP camera to Channel Vision default settings, place one side of a stripped jumper wire in to the "Default" terminal on the connector.
Then, place the other side of that cable into to "GND" terminal.
Plug in power cable. Once camera has restarted, remove the electric wire and plug in the Ethernet cable. Use IP installer to find the camera IP. (Default is http://192.168.1.200) Default username and password is "admin"



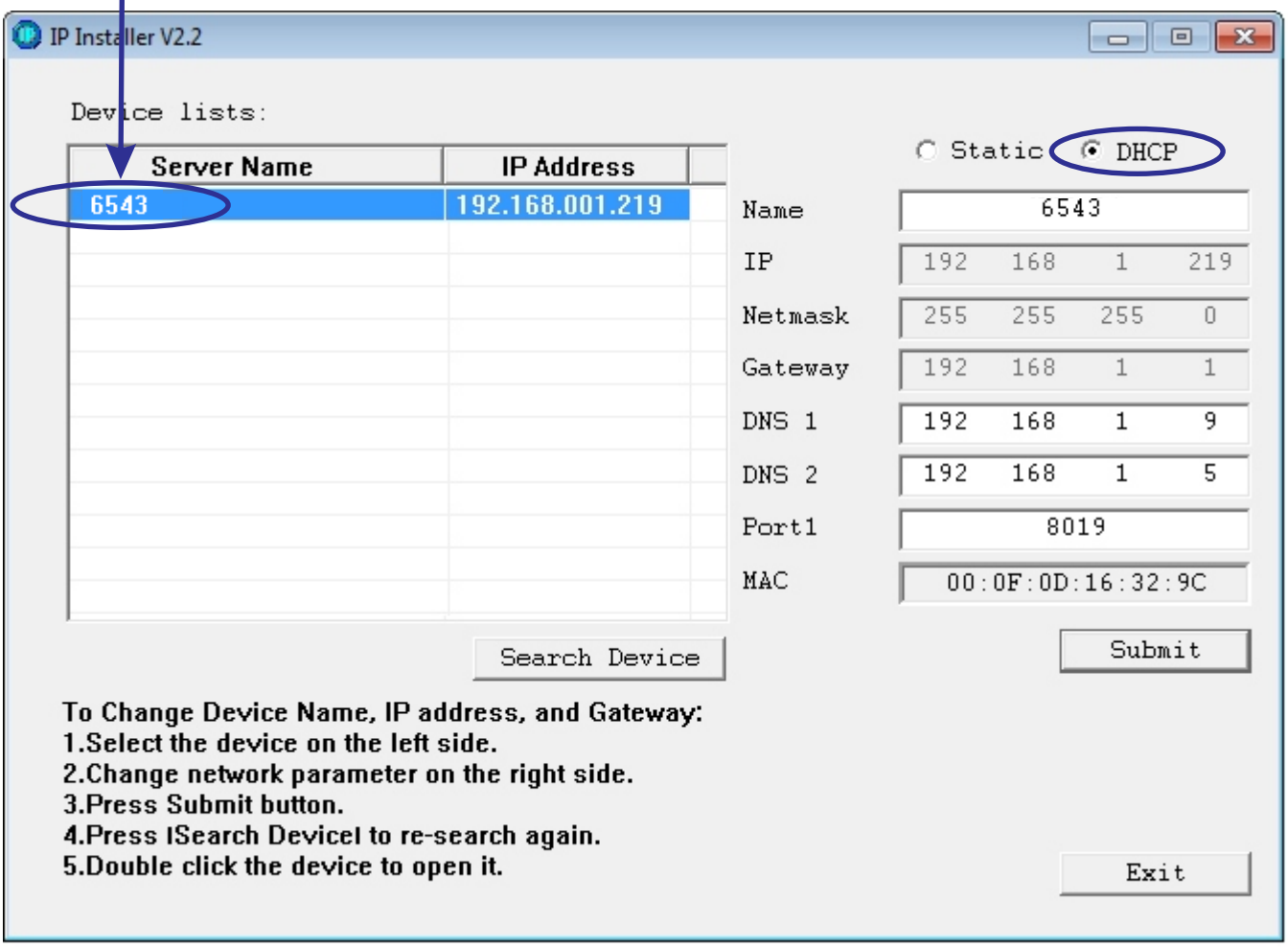
Option One: Assigning an IP Address (DHCP)

Your IP Camera comes set to DHCP by default. This means that, just like your laptop computer or desktop PC, an IP address is automatically assigned to the IP camera by your router. This, combined with UPnP (Universal Plug and Play), will make the IP setup of the IP camera quick and easy to accomplish.

***For the best security, Channel Vision recommends you use a static IP setting and standard port forwarding.**

1. Open IP installer. This is located on your software disk under the folder "\CVT IP Installer

2. An IP address should already be assigned
In the example below, the router has assigned 192.168.1.219 to the IP Camera
3. Double click on the name of the IP Camera. This will open the IP camera in your default browser



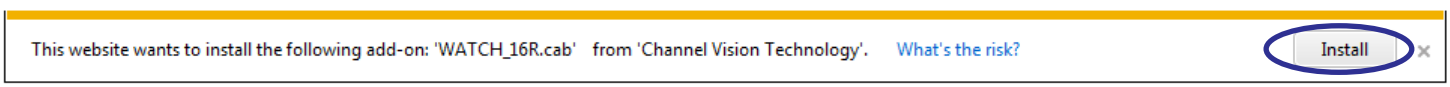
Connecting To The IP Camera (DHCP)

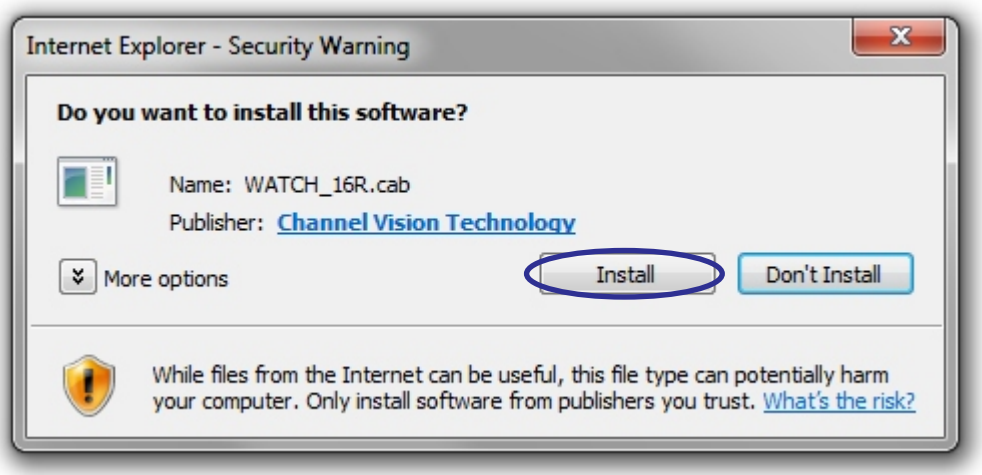
4. You will be prompted for a username and password.
The default username is **'admin'**
The default password is **'admin'**

Windows Security
The server 192.168.1.206 at 6543 requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
admin
Remember my credentials
OK
Cancel

Installing The ActiveX Control

5. The first time you connect to the camera via Internet Explorer, it will ask you to install the ActiveX control. Internet Explorer 6, 7, 8, or 9 must be used to run this ActiveX control.




Internet Explorer - Security Warning
Do you want to install this software?
Name: WATCH_16R.cab
Publisher: Channel Vision Technology
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Option Two: Assigning an IP Address (Static)

1. Use the software, “IP Installer” to assign the IP address to your IP Camera. You can find "IP Installer" in the supplied CD.

2. Execute IP Installer**,** located on your disk under the folder “Software”

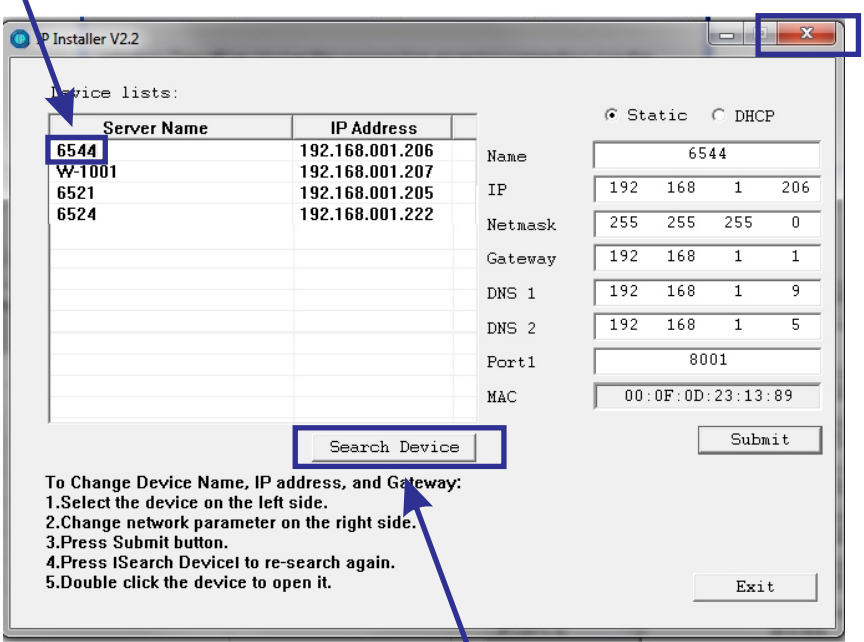
3. If Windows prompts you to unblock IP Installer, you must select “unblock”

There are 3 options of IP configuration:

A. Fixed IP (Public IP or Virtual IP)
B. DHCP (Dynamic IP)
C. Dial-up/DSL (PPPoE)

Windows Security Alert
To help protect your computer, Windows Firewall has blocked some features of this program.
Do you want to keep blocking this program?
Name: IPInstaller V2.1 Network Device Scan
Publisher: Unknown
Keep Blocking
Unblock
Ask Me Later
Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

Double click the camera name to go directly to the camera



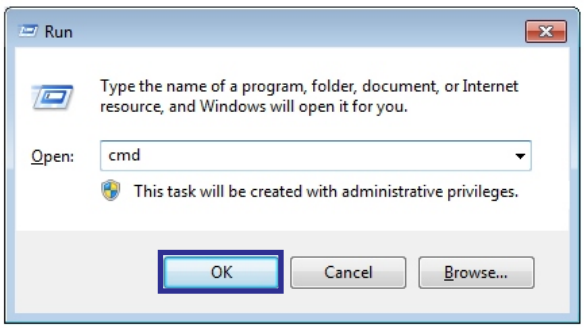
"IP Installer" will search all IP Cameras connected to your LAN network.The user can click “Search Device” to search again.

Assigning an IP Address (Static) /cont

4. Click the start icon on your computer.

5. Type the word “run” and select enter on your keyboard.

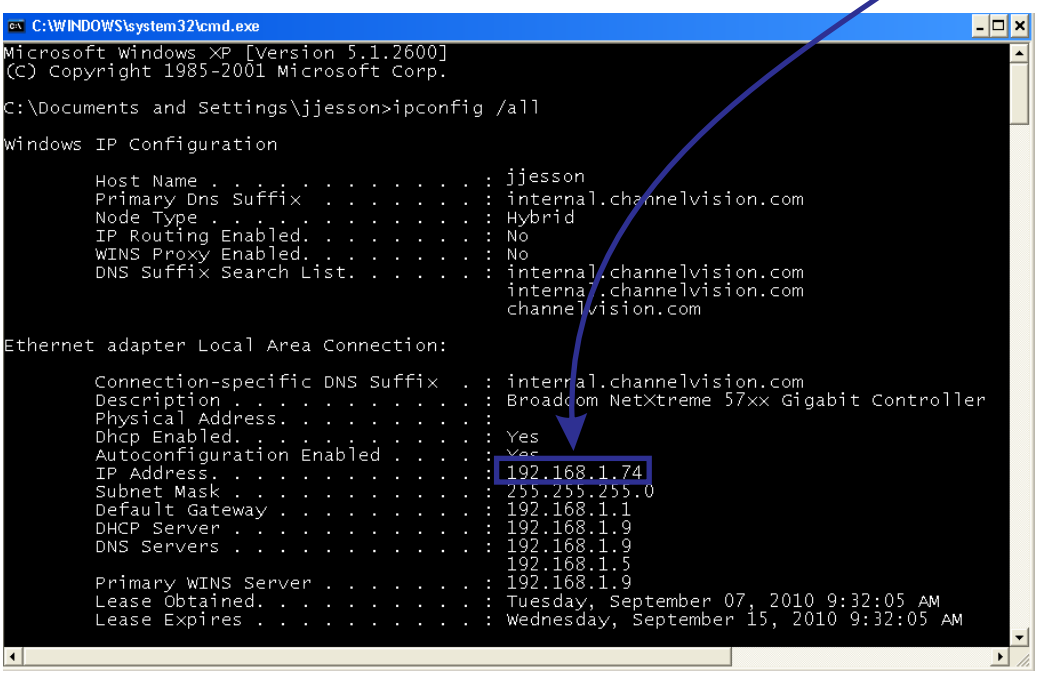
6. Type in ‘cmd’ and press enter on your keyboard, or press ok.


Run
Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:
cmd
This task will be created with administrative privileges.
OK
Cancel
Browse...

7. Type in ‘**ipconfig /all**’ into the DOS prompt that appears. Press “Enter”.

8. Write down your computer’s IP address.

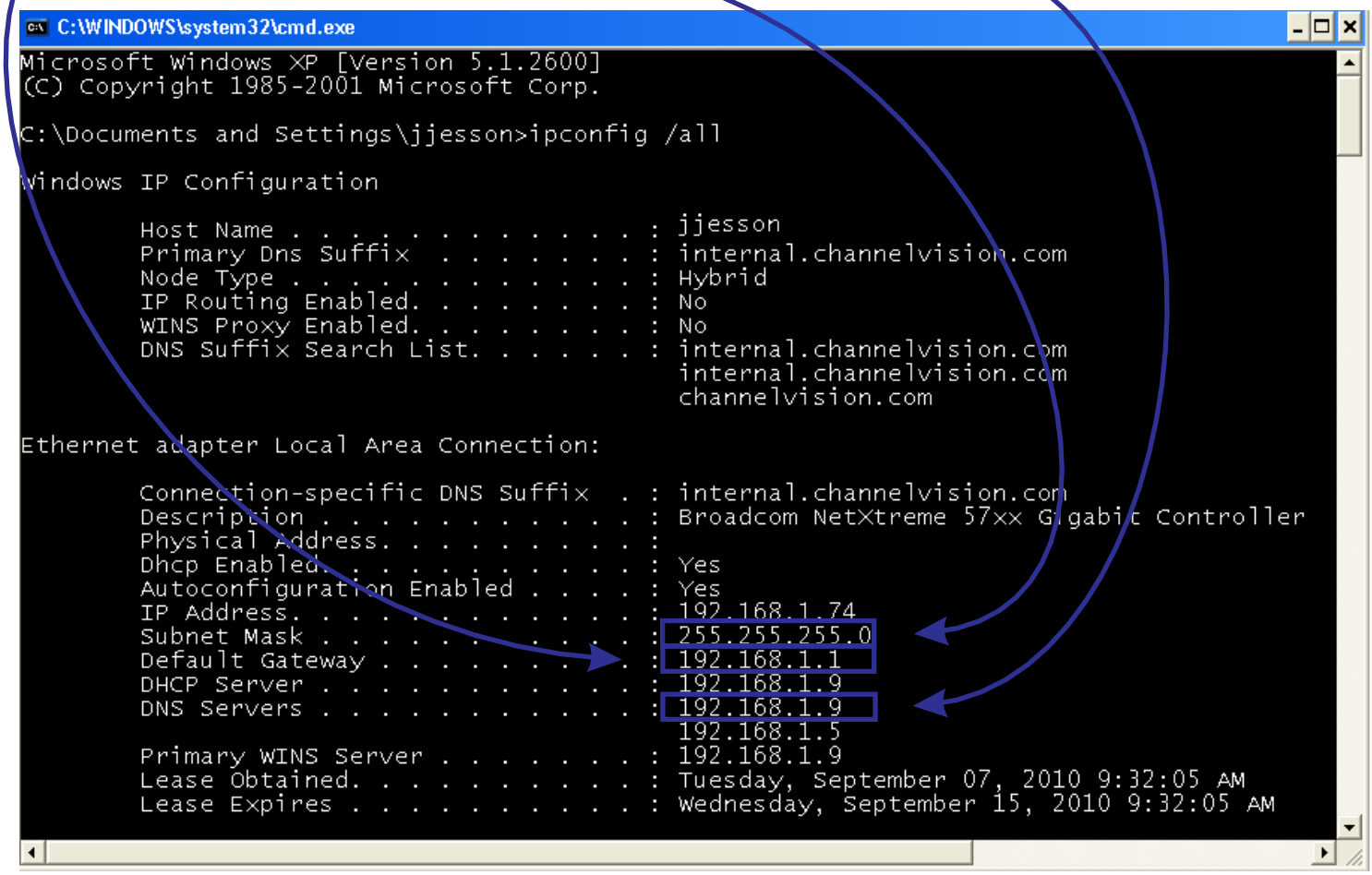
Do not use the same IP address as the computer in the IP Camera.
In the example below, the computer’s IP address is 192.168.1.74.
The IP address of the IP camera must be different than the IP address in the computer.
Each network-able device in your network has an IP address assigned.
The IP chosen for your IP Camera is not the same address as any other device on your network.


C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\jjesson>ipconfig /all
Windows IP Configuration
Host Name . . . . . : jjesson
Primary Dns Suffix . . . . . : internal.channelvision.com
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : internal.channelvision.com
internal.channelvision.com
channelvision.com
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . : internal.channelvision.com
Description . . . . . : Broadcom NetXtreme 57xx Gigabit Controller
Physical Address. . . . . :
Dhcp Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IP Address. . . . . : 192.168.1.74
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.1
DHCP Server . . . . . : 192.168.1.9
DNS Servers . . . . . : 192.168.1.9
192.168.1.5
Primary WINS Server . . . . . : 192.168.1.9
Lease Obtained. . . . . : Tuesday, September 07, 2010 9:32:05 AM
Lease Expires . . . . . : Wednesday, September 15, 2010 9:32:05 AM

Assigning an IP Address (Static) /cont

9. Copy/write down the following information from the DOS prompt.

A. Default Gateway (Example 192.168.1.1)
B. DNS Server (if 2 servers, use the first one, for example 192.168.1.9)
C. Subnet Mask (Example 255.255.255.0)


C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\jjesson>ipconfig /all
Windows IP Configuration
Host Name . . . . . : jjesson
Primary Dns Suffix . . . . . : internal.channelvision.com
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : internal.channelvision.com
internal.channelvision.com
channelvision.com
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . : internal.channelvision.com
Description . . . . . : Broadcom NetXtreme 57xx Gigabit Controller
Physical Address. . . . . :
Dhcp Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IP Address. . . . . : 192.168.1.74
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.1
DHCP Server . . . . . : 192.168.1.9
DNS Servers . . . . . : 192.168.1.9
192.168.1.5
Primary WINS Server . . . . . : 192.168.1.9
Lease Obtained. . . . . : Tuesday, September 07, 2010 9:32:05 AM
Lease Expires . . . . . : Wednesday, September 15, 2010 9:32:05 AM

Assigning an IP Address (Static) /cont

7. Enter the information you wrote down into the IP camera network page

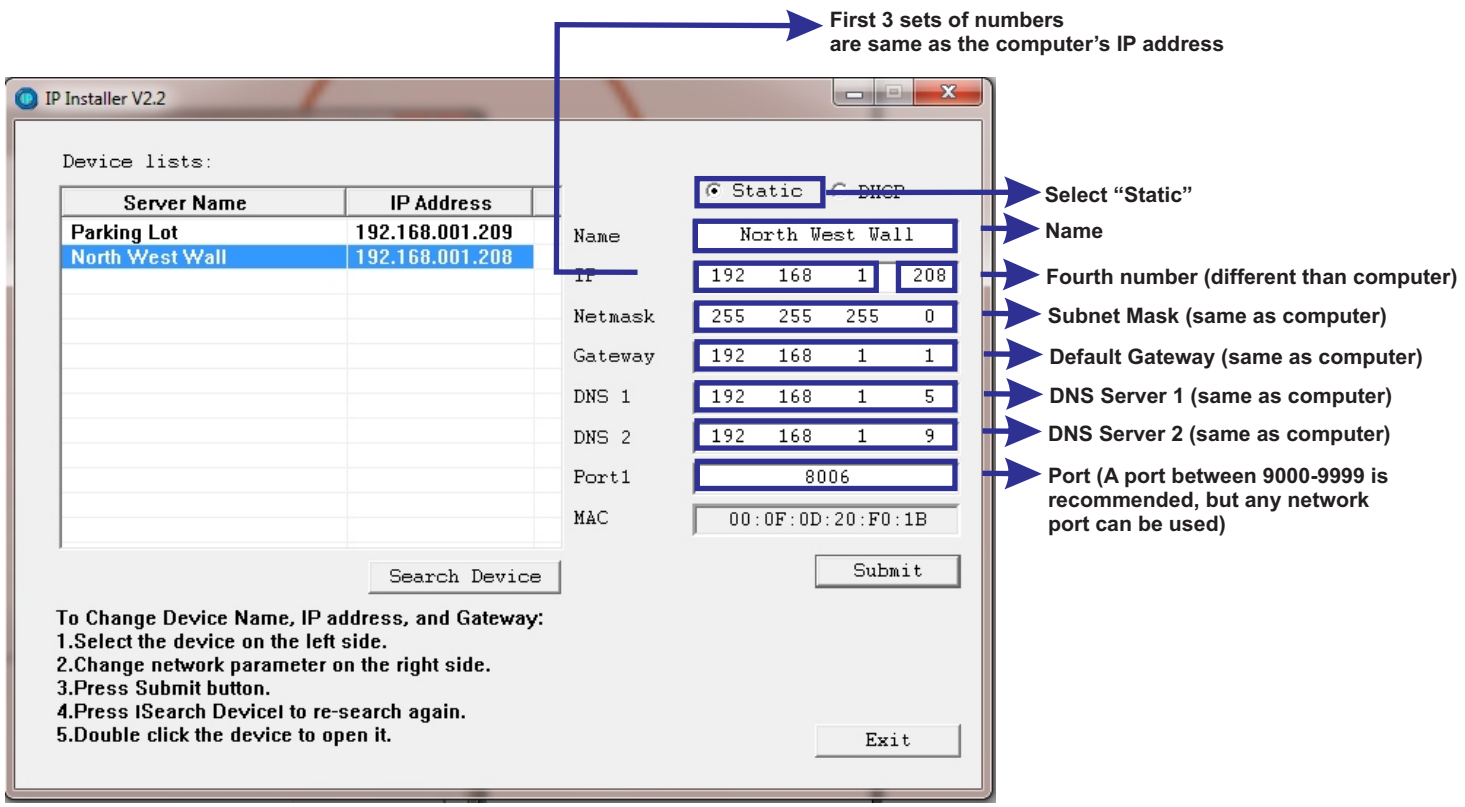
A. Default Gateway (Enter this number under "Gateway")
B. DNS Server (Enter this number under "DNS 1")
C. Subnet Mask (Enter this number under "Netmask")

8. Giving the IP Camera a unique IP address.
Assign an IP address to the IP Camera by using the first 3 sets of numbers of your default gateway.
An IP address has 4 sets of numbers, each followed by a period.
For example, xxx.xxx.xxx.xxx
My default gateway is 192.168.1.1
For example, my IP Camera's address will start with 192.168.1.xxx

9. Make sure you use a number different that your computer's IP address.
(Generally between 2-250) This number needs to be out of the range of DHCP. DHCP is assigned with your router, and can be checked by logging into the router.

My computer's IP address is 192.168.1.74. 192.168.1.208 is used in the example below.
You must choose a number that is different from your computer's IP.
If your IT technician has designated a static internal IP for your IP Camera, use that address.

10. To assign the port, choose a port between 5400-9000, and type it into "Port 1" If a specific port has



To change numbers, select the appropriate area on IP installer with your mouse, and type in the info.

***Disclaimer: This is an example based on a general network setup.**
All networks do not match these settings exactly, as all networks are different

Connecting To The IP Camera (Static)

1. Open Internet Explorer. Type the IP address of the IP camera into the browser link window. Also, make sure to type the port at the end of the link.

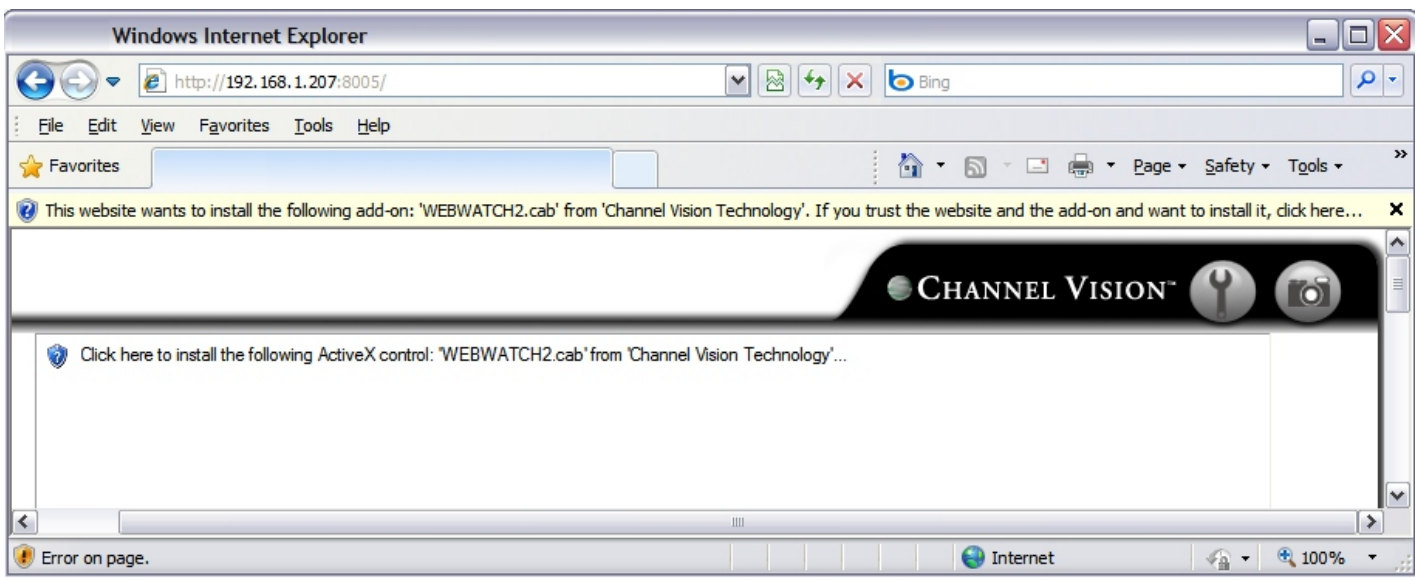
For example, I will type in **http://192.168.1.206:8005**

2. You will be prompted for a username and password.
The default username is **'admin'**
The default password is **'admin'**

Windows Security
The server 192.168.1.206 at 6544 requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name
Password
Remember my credentials
OK
Cancel

Installing The ActiveX Control

1. The first time you connect to the camera via Internet Explorer, it will ask you to install the ActiveX control. Internet Explorer 6, 7, 8, or 9 must be used to run this ActiveX control.

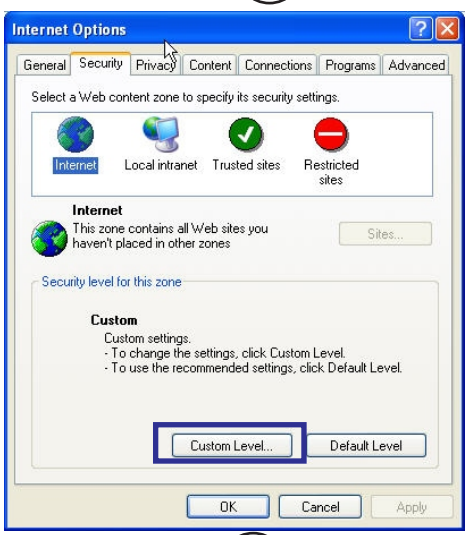

Windows Internet Explorer
http://192.168.1.207:8005/
Bing
File Edit View Favorites Tools Help
Favorites
Page Safety Tools
This website wants to install the following add-on: 'WEBWATCH2.cab' from 'Channel Vision Technology'. If you trust the website and the add-on and want to install it, click here...
CHANNEL VISION
Click here to install the following ActiveX control: 'WEBWATCH2.cab' from 'Channel Vision Technology'...
Error on page.
Internet
100%

Configuring Internet Explorer

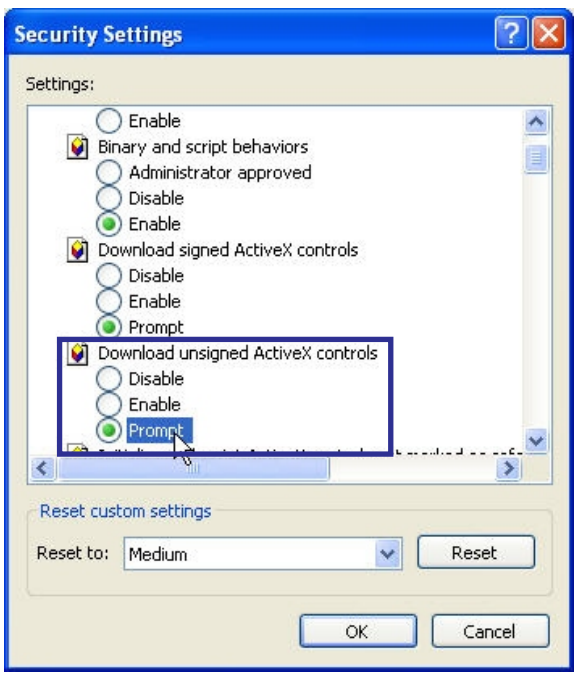
If the installation of the ActiveX control fails, for example the browser page says “done” but you do not see your camera, please check the security settings for your IE browser. Follow the instructions below.

1

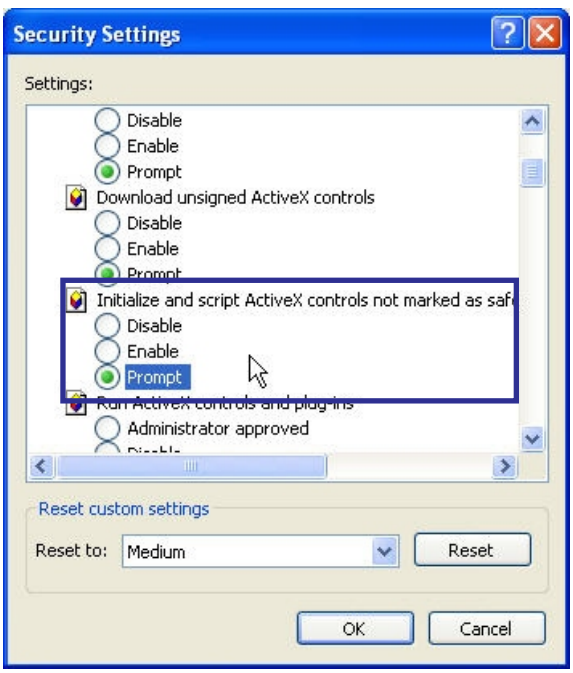
2



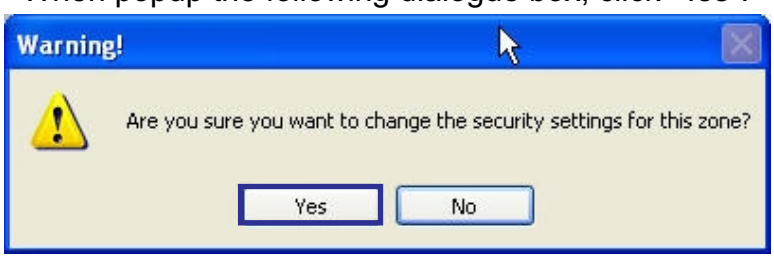
3



4



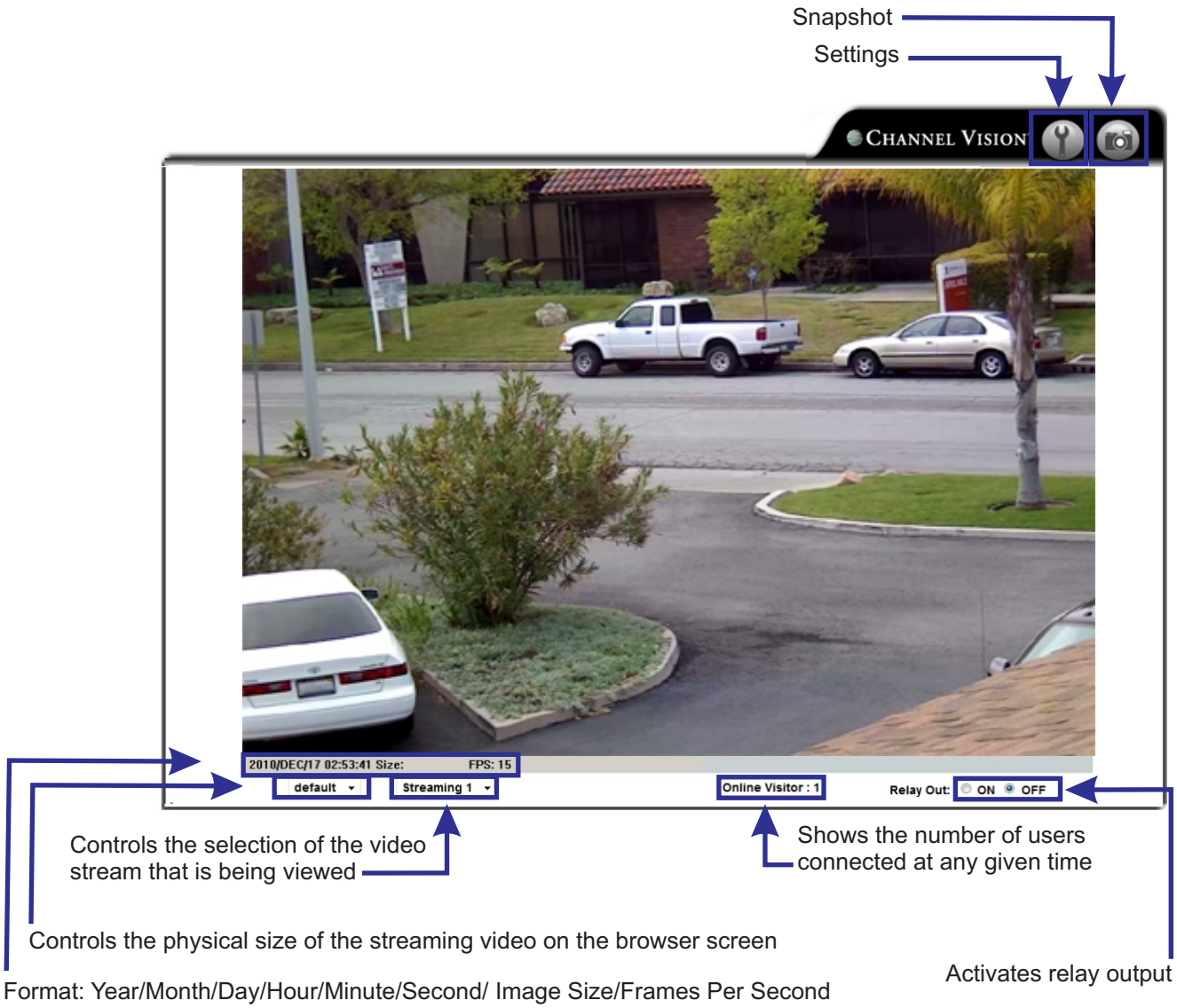
When popup the following dialogue box, click “Yes”.



5

Live Viewing

Once you connect to your camera, you will see the following screen.
Below the icons and their functionality are defined.

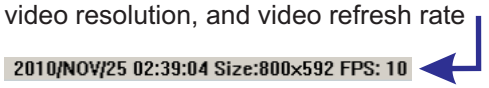


Live Viewing/cont.

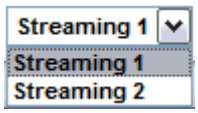
1. This icon opens the settings menu

2. This icon takes a snapshot

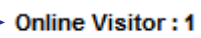
3. This icon shows system time, video resolution, and video refresh rate



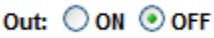
4. The bottom bar has an icon that allows you to select which stream you want to view. Stream 1 is usually the larger, better quality stream. Stream 2 is the smaller stream, generally used for mobile viewing



5. The bottom bar has an icon shows how many users are connected to the IP camera.



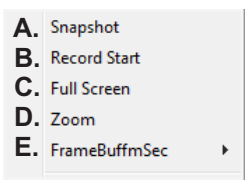
6. This icon will control/activate the relay output on the camera wire pigtail. A relay can activate lights, alarms, or anything that uses a contact closure.



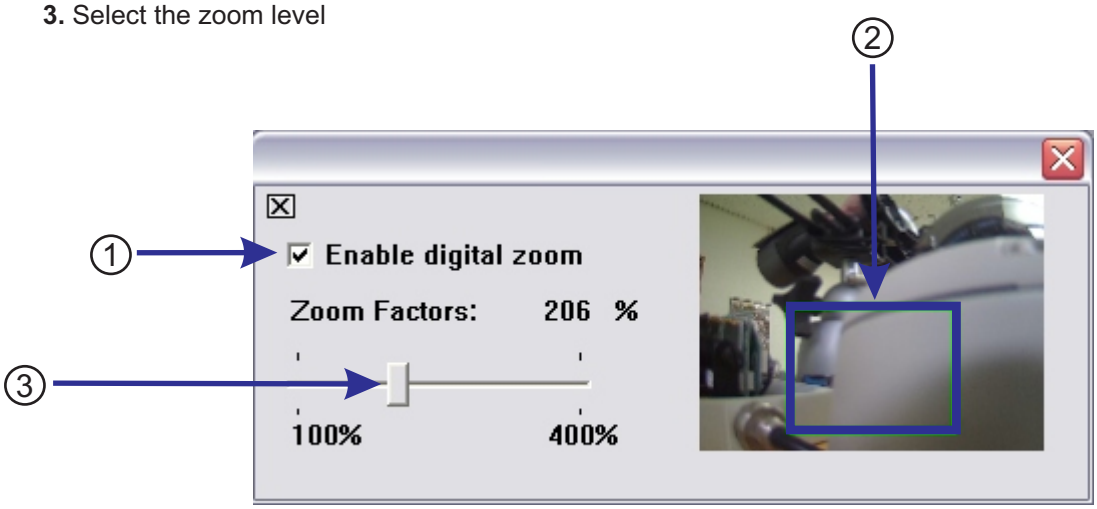
7. If you double click the video feed, it will make the video full screen. To change video back to normal mode, press 'Escape' on your keyboard, or double click anywhere in the video feed a second time.

8. If you right click on the video, you have access to several different functions.

A. Snapshot: Takes a snapshot
B. Record Start : Records video to your computer
C. Full Screen: Click to enter full-screen mode
D. Zoom: Digital Zoom. This is explained below
E. Frame BuffmSec: This changes the frame buffer rate



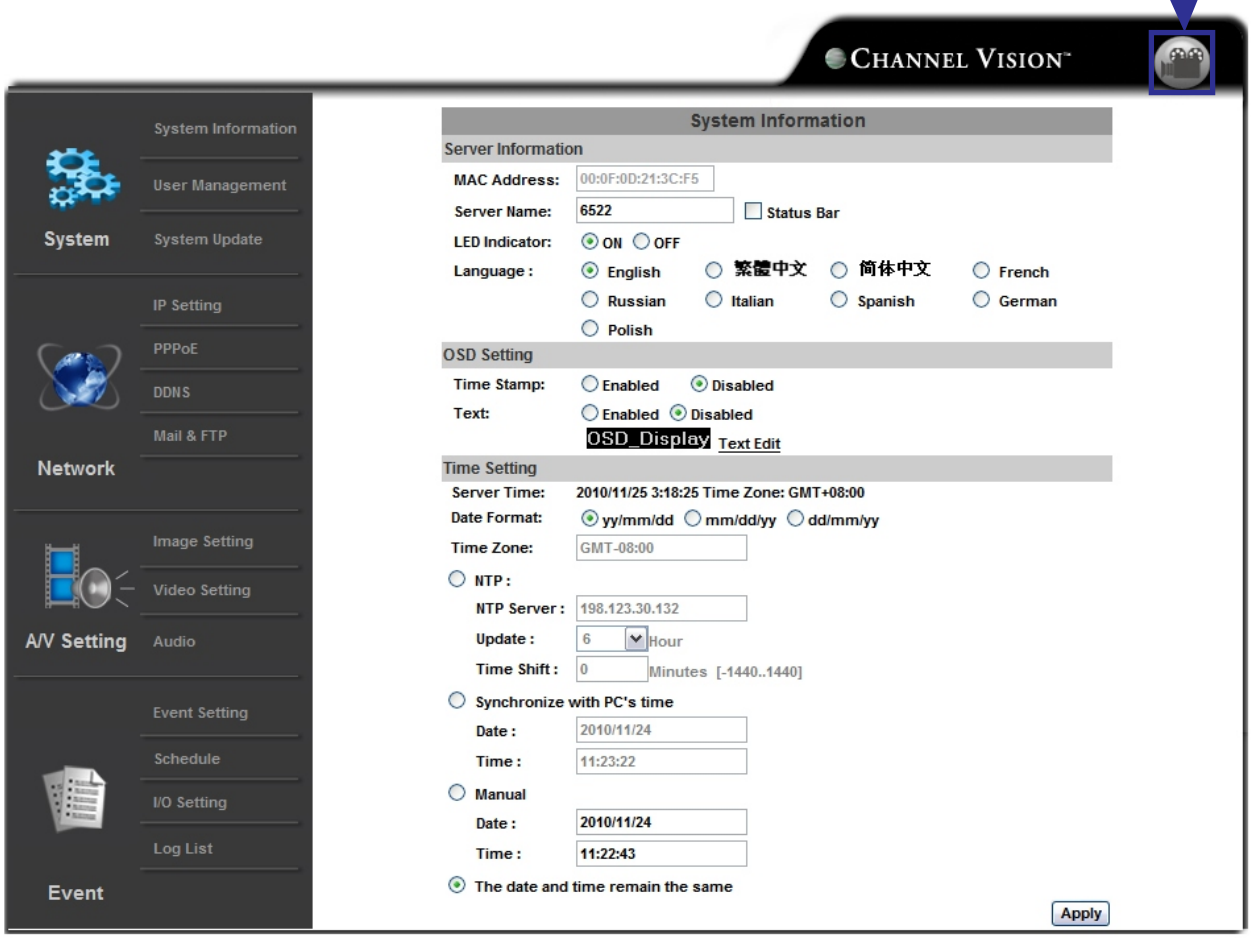
Digital zoom
1. Select "Enable digital zoom"
2. Select the area of the screen you wish to zoom in on
3. Select the zoom level



Configuration

1. Select this icon to enter the settings menu

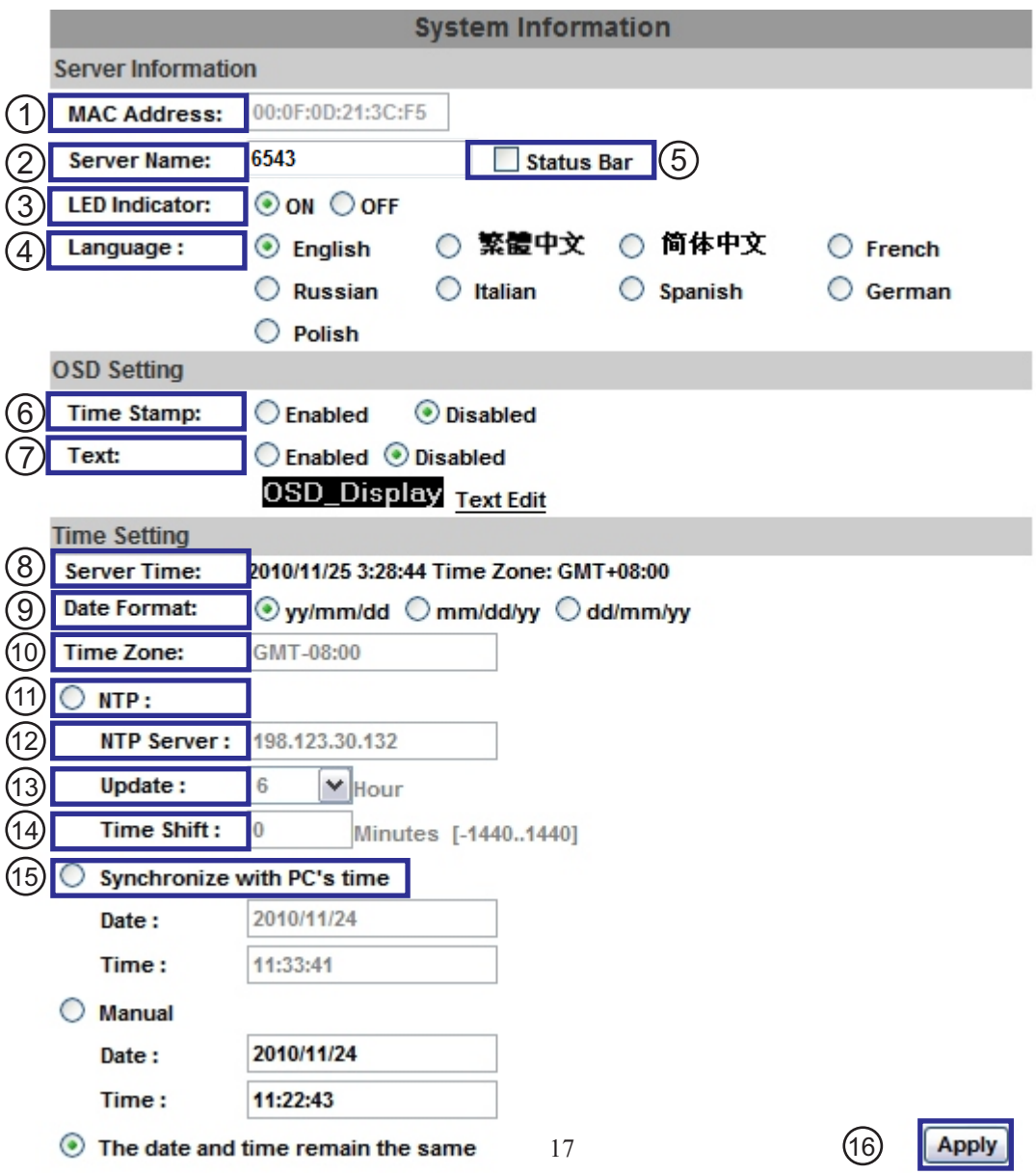
2. Select this icon to go back to your live video feed



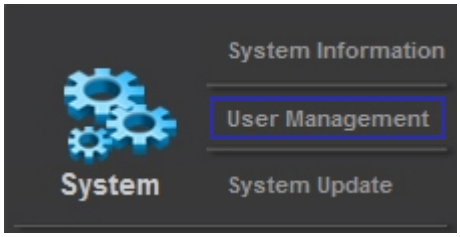
System Configuration

System Information:
Use the number scheme below for a description of each item:

1. **MAC Address:** (Media Access Control) address; This is a unique identifier assigned to IP devices for communication with the network. Your IP camera is pre-set with a MAC address
2. **Server name:** Select to edit the camera name
3. **LED Indicator:** Select On/Off to toggle the blinking LED light in the camera
4. **Language:** Select a language to change the language of the ActiveX interface
5. **Status Bar:** Select On/Off to toggle the information bar (below the main video stream)
6. **Time Stamp:** Select Enabled/Disabled to turn the video timestamp on or off
7. **Text:** Select Enabled/Disabled to specify the name that can be displayed on the top left area of the screen
8. **Server Time:** This shows the current time on your IP camera
9. **Date Format:** Select to choose your desired date format
10. **Time Zone:** This shows your current time zone
11. **NTP:** The Network Time Protocol is a protocol for synchronizing the clocks of computer systems
12. **NTP Server:** If you have a NTP server, input it here
13. **Update:** If using an NTP server, select this drop down menu to choose the update interval
14. **Time Shift:** Time shift is used to compensate for the time it takes to server to process the sync request for your time. This is usually not needed.
15. **Synchronize with PC's time:** Select this to match your computer's clock to your IP camera
16. **Apply:** Select this button to save your changes

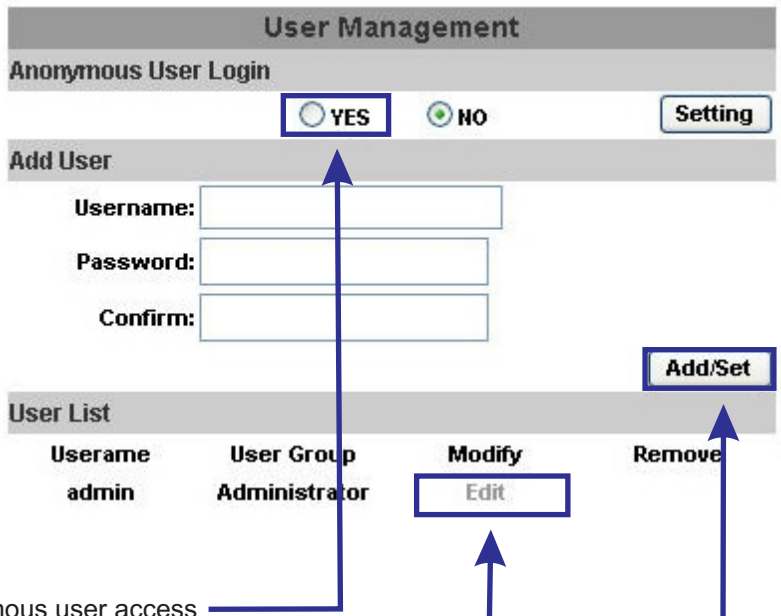


User Management

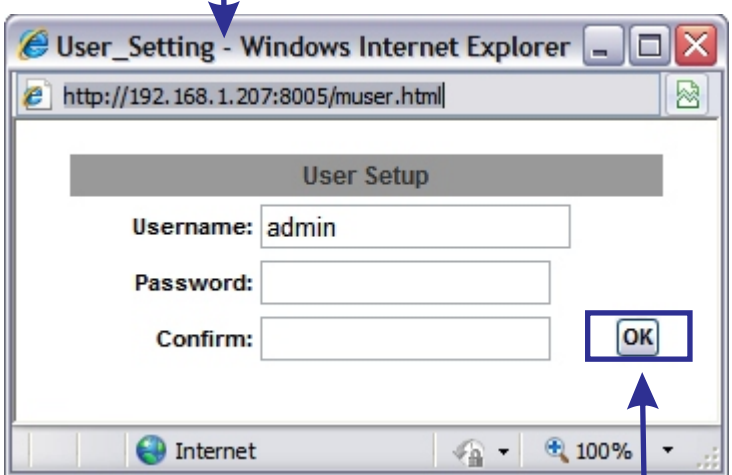


User managment:
This IP camera supports 3 different types of users.

1. Administrator
2. General
3. Anonymous

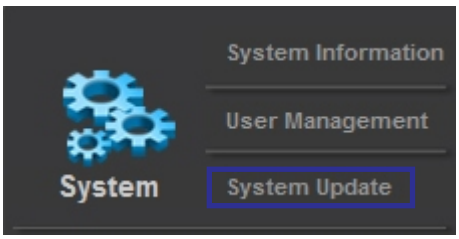


Click “Yes” to allow anonymous user access
Click “Add/Set” to add a user
Click “Edit” to modify a user.
When you click edit, the following window will pop up:
(Shown below.)



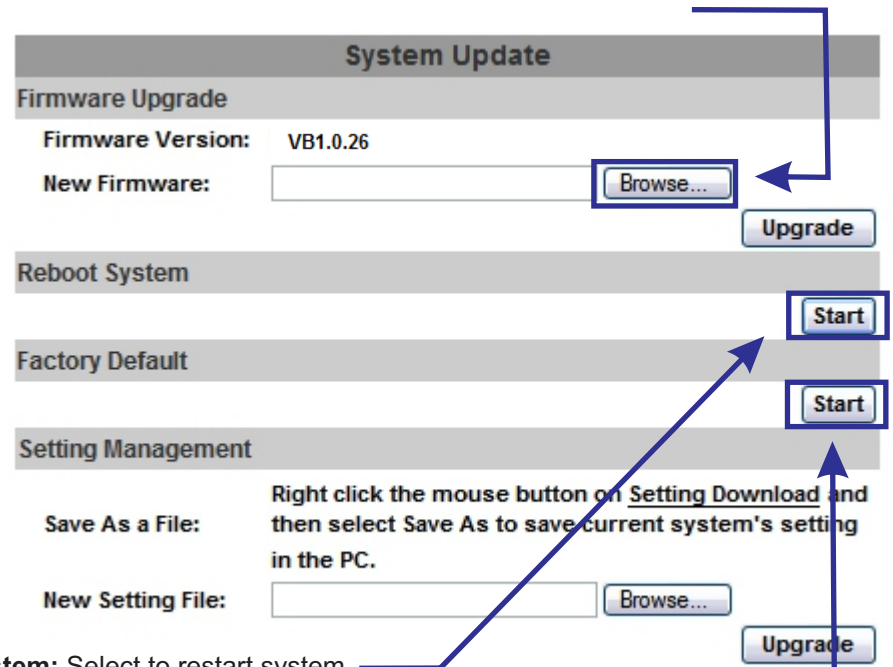
Add the username and password, and click “OK” to save your new user.

System Update



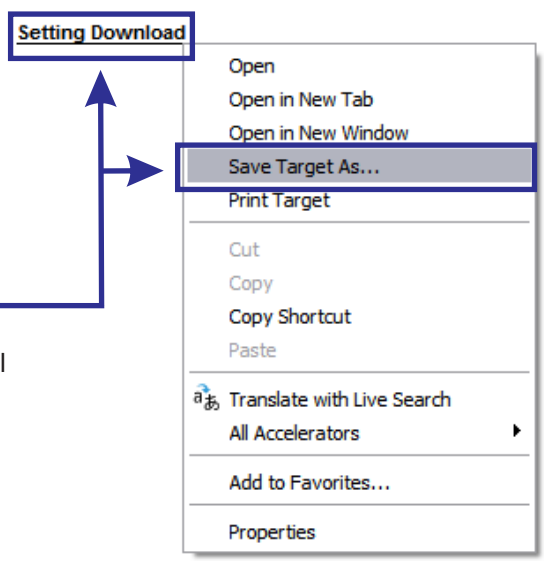
System Update: This menu is used to perform the following functions:

1. **Firmware Update:** Channel Vision will update the firmware from time to time. By registering your IP camera, you have access to all firmware improvements and extended warranty options.
   How? See the product page on www.channelvision.com
   To load new firmware, press “Browse” and select the firmware.bin file.



2. **Restart System:** Select to restart system.
You can reset the IP camera to factory default settings if desired
If you backup your settings, you can load your backup file where it says “New Setting File”

3. **Settings backup:**
You can backup your settings by right clicking your mouse on “Setting Download” and selecting “Save Target As”. You may also load previously saved settings files this way. When loading previously saved fil click “Browse” and then “Upgrade”



Network

Network Setup/IP Setting: This setting is for the external viewing of camera over the internet. Once set up, you will be able to view this camera from anywhere in the world.
This IP camera supports DHCP and Static settings.
If you are new to installing an IP camera, use #2 (**Static IP**)

DHCP: If you use this setting, your IP information will be pulled automatically from your router. This not recommended if you are going to view this camera outside of the building that it resides in.

Static IP: This is an IP that you manually set. This IP must not be the same as any other device within your network. You must also set default gateway, DNS server, subnet mask, and DNS server. Please refer to page 6 & 7 for instructions on how to obtain these numbers.

Port Assignment: You can assign different ports for your camera. (Explained below.)

Web Page Port: (This is the port that 99% of installations will use)
A web page port is used to transmit data out of your network. For example, If my external IP address is **http://67.88.12.50**, and my port was 5400, I would put a ":" and the port. The final address would be **http://67.88.12.50:5400**

RTSP Transmitting Port: Port for RTSP stream.

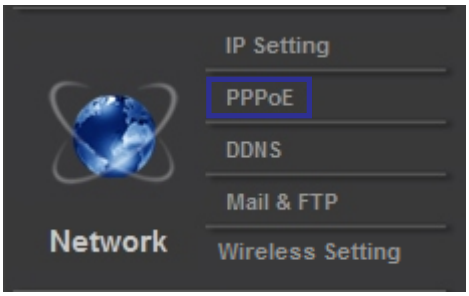
RTP start and end port:
In RTSP mode, you may use TCP and UDP for connecting
TCP connection uses RTSP port (554) UDP connection uses RTP start & end port**.**

UPnP: This IP camera supports UPnP. If this service is enabled on your computer, the camera will be automatically detected and a new icon will be added to "My Network Places".

Below are instructions on how to activate UPnP on your computer:

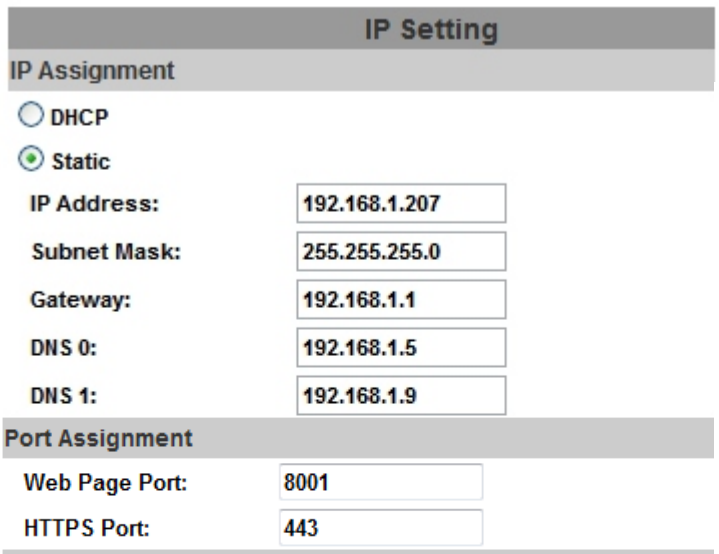
A. Open the control panel from the start menu.
B. Select "Add/Remove programs"
C. Select "Add/Remove Windows components"
D. Open "Networking Services" section
E. Click "Details" and select UPnP to setup the service.
F. Once activated, the IP camera icon will appear in "My Network Places"
G. You can now double click that icon to access the camera with your IE browser.

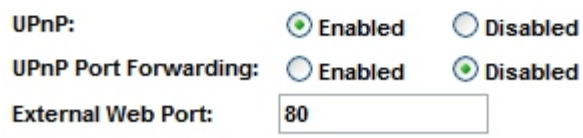
Network/cont



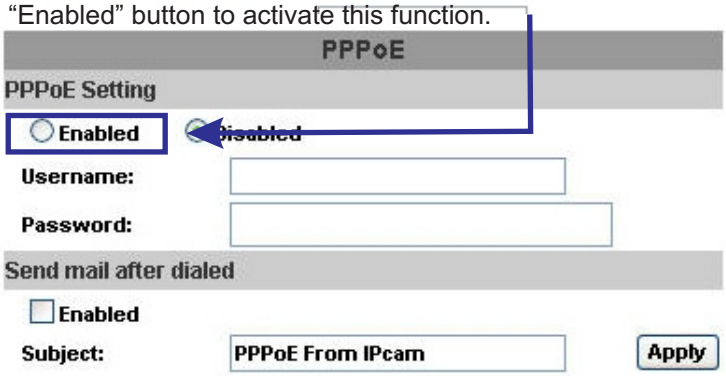
Network/cont:

IPV4: Below is an example of the **IPV4** network settings menu. This is where you key in all of your IP information from your network. These settings must be entered correctly in order for the IP camera to be



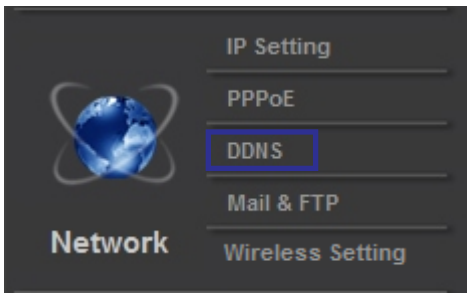


PPPoE: Check the PPPoE “Enabled” button to activate this function.



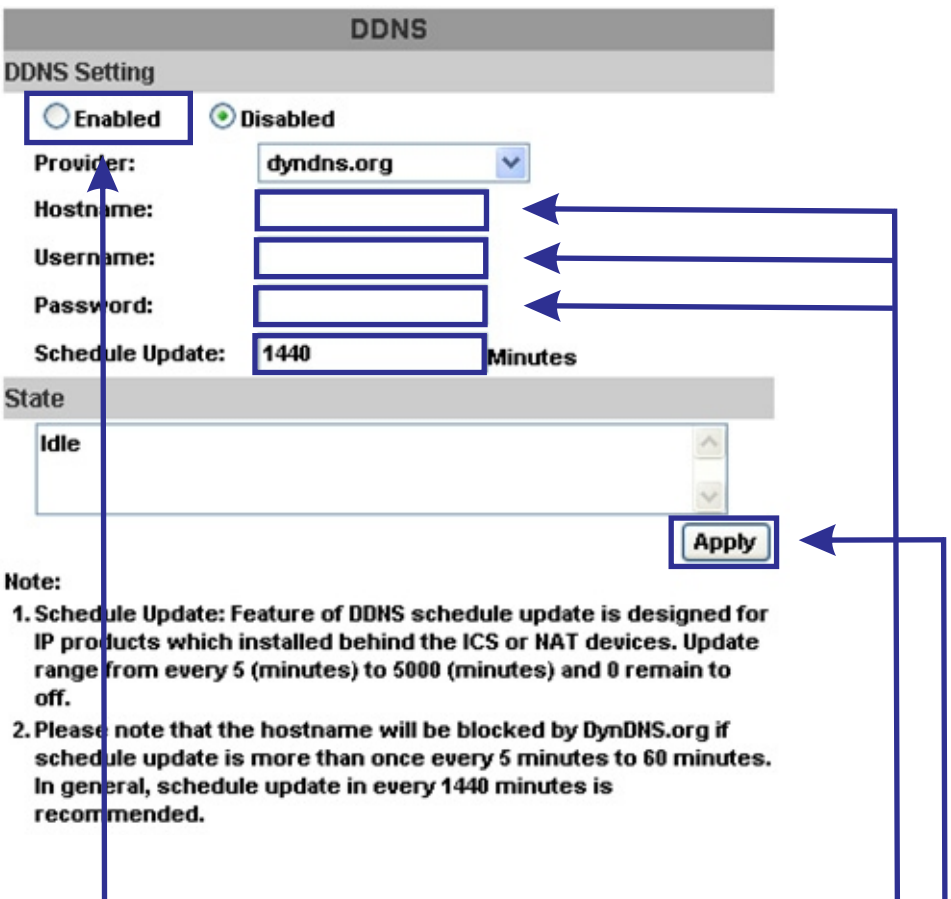
You can key in a username and password for the connection if you are using ADSL.
Send mail after dialed: When connected to the internet, this IP camera will send a email to the specified email account. To configure the IP camera email settings, please refer to the “Mail and FTP Settings”

Network/cont



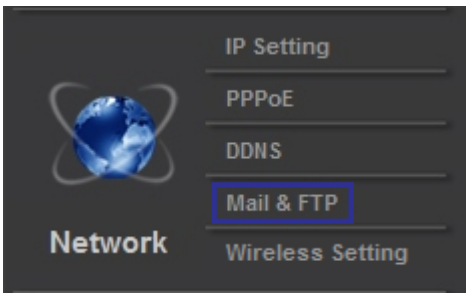
Network/cont: DDNS:
This IP camera supports DDNS (Dynamic DNS) service.
Select “Enabled” to enable the DDNS service.

For viewing the IP Camera over the internet while using a dynamic (rotating) IP address, there are many services available online.


DDNS
DDNS Setting
Enabled
Disabled
Provider:
dyndns.org
Hostname:
Username:
Password:
Schedule Update:
1440
Minutes
State
Idle
Apply
Note:
1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

1. Enable the service
2. Key in the DynDNS server name, username, and password
3. Set up the IP update refresh rate
4. Click “Apply”
5. If it updates to often, the IP will be blocked by DynDNS
   Channel Vision recommends you set it to update once per day (1,440 minutes)

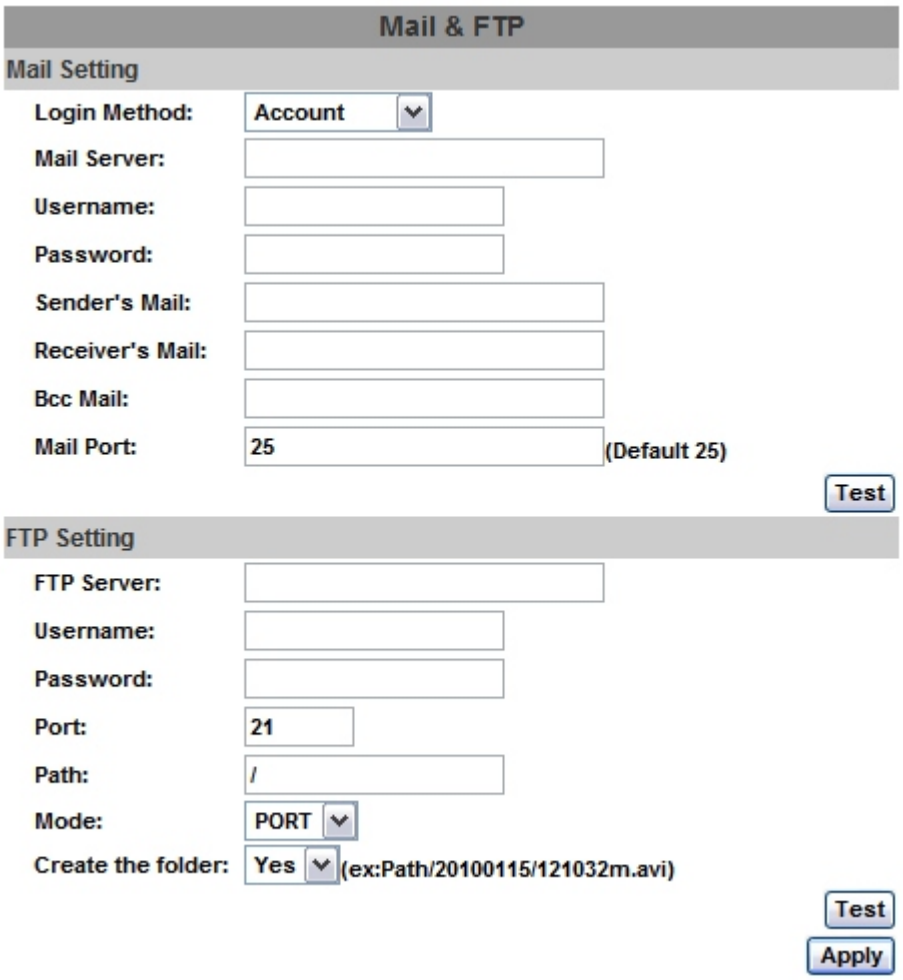
Network/cont



Mail & FTP: Enter your Mail and FTP information into the menu below:

Mail: Mail is a way the IP camera can send you an email when certain actions occur, for example motion, a contact closure on the sensor, etc.

FTP: FTP is for uploading recorded files to a designated FTP site



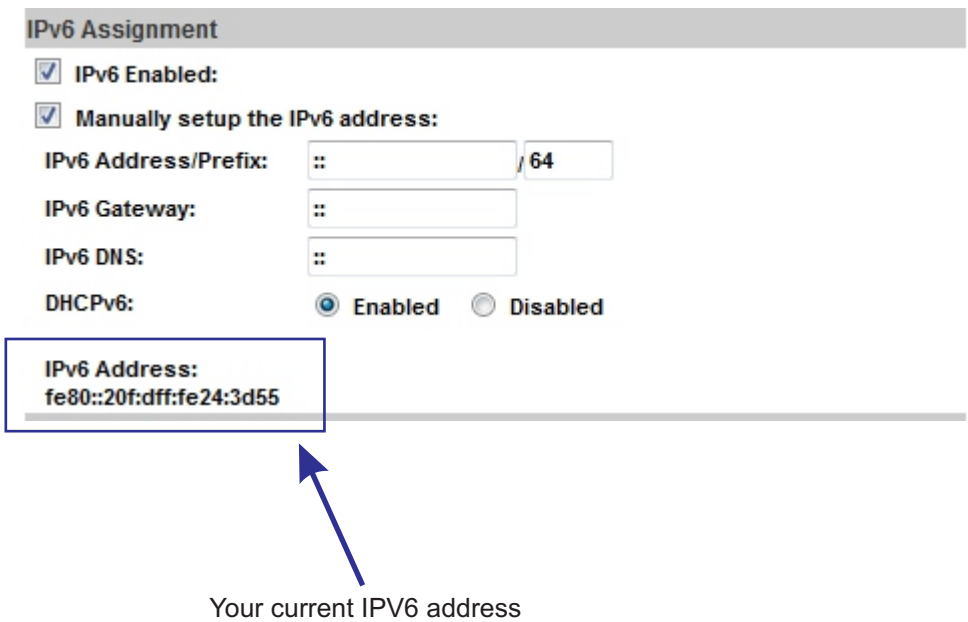
Please note: standard free web mail email services block devices such like this, due to spam settings.

Network/cont

Network/cont, IPV6: Below is an example of the **IPV6** network settings menu. This is where you key in all of your IP information from your network. These settings must be entered correctly in order for the IP camera to be viewable over the IPV6 network.

To manually set your IPV6 address, select that option, and enter your address, gateway, and DNS server.

For DHCPv6, click “enabled”

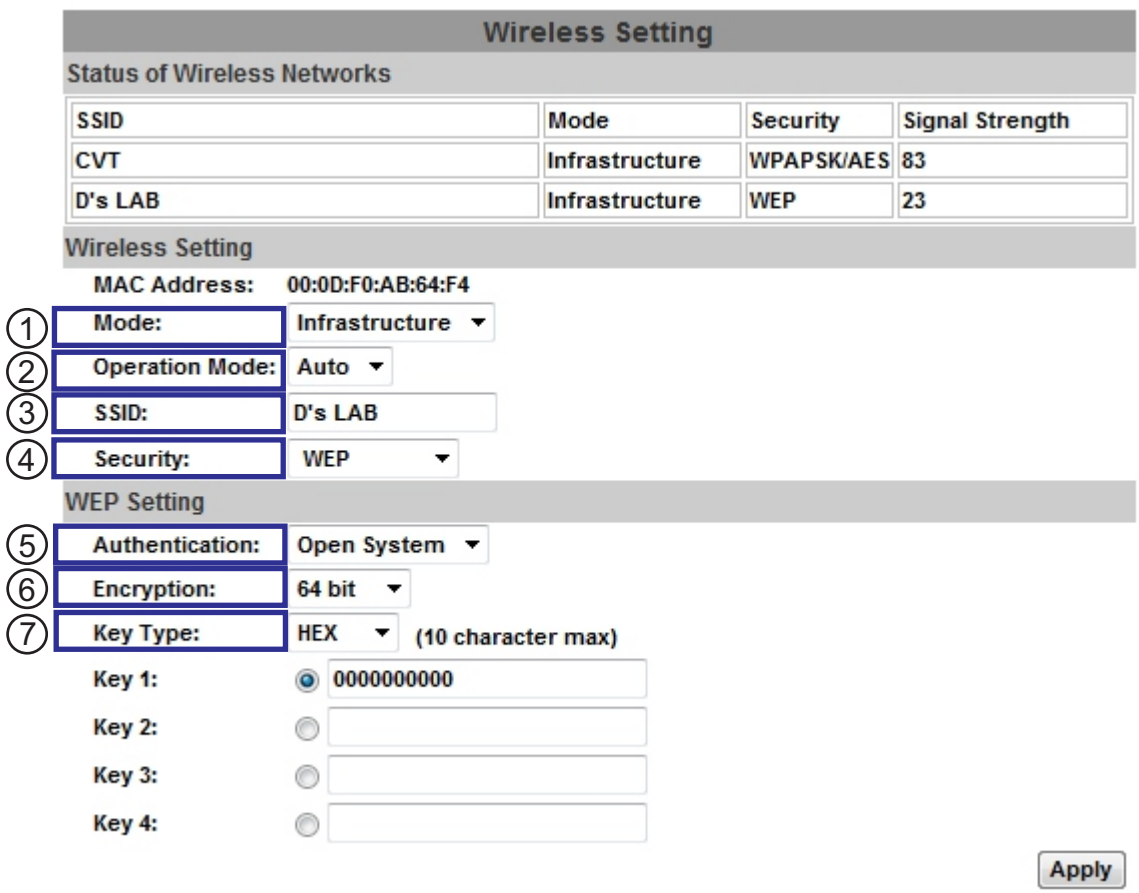


Your current IPV6 address

Wireless

Network/cont, Wireless:

1. **Mode:** Infrastructure or ad-hoc
2. **Operation Mode:** Auto, 11g, 11b, or 11n
3. **SSID:** Name of your network
4. **Security:** Click to adjust security type. WEP, WPA-PSK, and WPA2-PSK are all supported
5. **Authentication:** Open information or shared key
6. **Encryption:** Choose your encryption, 64 or 128 bit supported
7. **Key Type:** Hex or ASCII



Video Settings

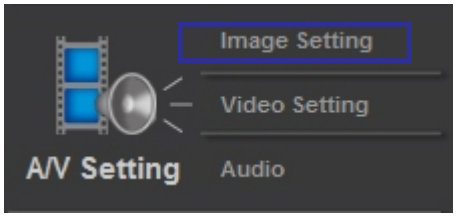


Image Setting: You can adjust the following items on this camera:

1. **Brightness:** This adjusts the brightness level of the camera
2. **Contrast:** This adjusts the difference in color and light between parts of an image
3. **Hue:** This adjusts the hue of the camera
4 **Saturation:** This adjusts the color saturation of the camera
5. **Sharpness:** This adjusts how sharp the image appears
6. **AGC:** This adjusts the automatic gain control
7. **Shutter Time:** This adjust the shutter speed to reflect various lighting conditions
8 **Sense-Up:** This allows adjustments of selectable digital slow shutter speeds
9. **D-WDR:** This adjusts digital Wide Dynamic Range, for bright to dark lighting
10. **Video Orientation:** This adjusts video orientation
11. **Day & Night:** This allows many options for manually setting camera mode
12. **Night to Day Lux:** This allows manual setting of day and night lux levels
13. **Current Lux:** This tells you what your current lux level is
14. **DNR:** This allows adjustment of digital noise reduction

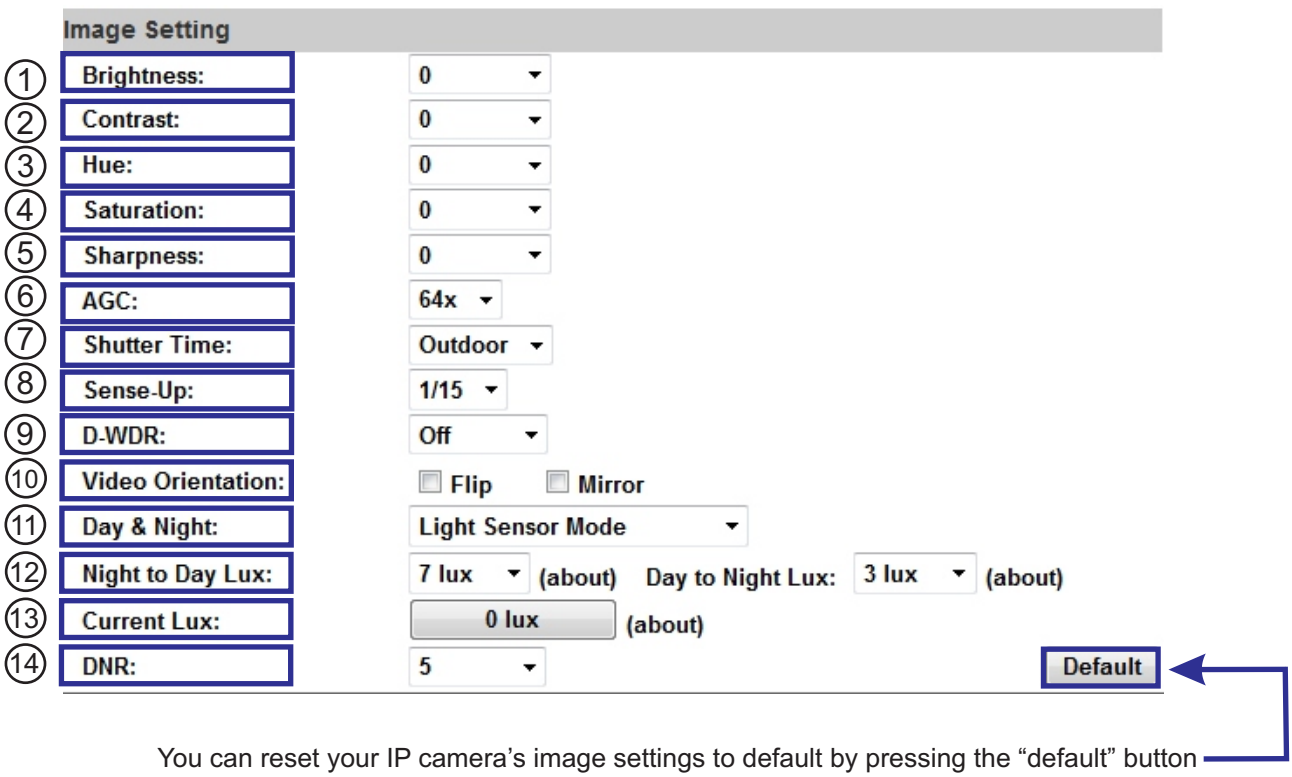


Image Setting
1 Brightness: 0
2 Contrast: 0
3 Hue: 0
4 Saturation: 0
5 Sharpness: 0
6 AGC: 64x
7 Shutter Time: Outdoor
8 Sense-Up: 1/15
9 D-WDR: Off
10 Video Orientation: Flip Mirror
11 Day & Night: Light Sensor Mode
12 Night to Day Lux: 7 lux (about) Day to Night Lux: 3 lux (about)
13 Current Lux: 0 lux (about)
14 DNR: 5
Default

You can reset your IP camera's image settings to default by pressing the "default" button

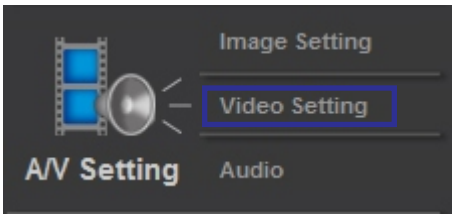
Video Settings/cont.

The 6544 IP camera is varifocal.
This means you can adjust the zoom and focus level of the camera from **3.3-12mm** on the 6544

How to adjust zoom and focus on the 6544

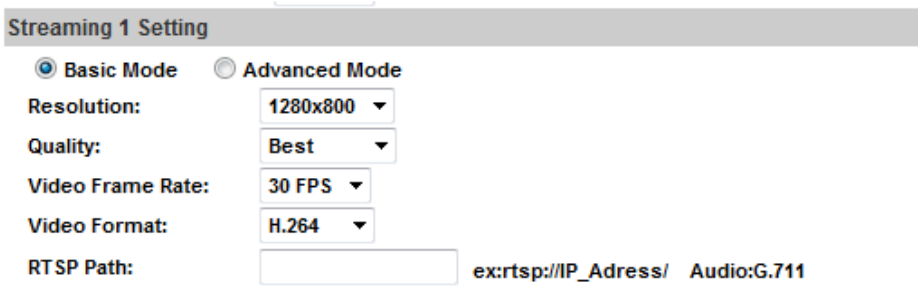
Using a flat head screwdriver, adjust the zoom or focus screws on the 6544 camera

Video Settings/cont.



Video Setting:
Click the drop down list to select Video System

Streaming: Basic mode:



1. **Resolution:**
   There are 5 resolutions you can choose from.
   1280x800, 1280x720, 640x480, 320x240, & 176x144

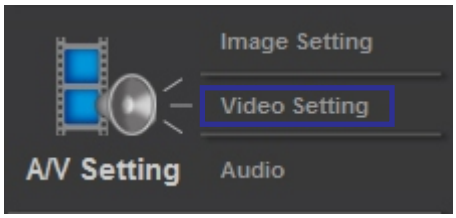
2. **Quality:**
   There are 5 levels you can adjust to:
   Best, High, Standard, Medium, & Low
   If you use the highest settings, the network streaming speed will be slower
   Also, if you record any files, the higher the quality, the larger the file will be

3. **Video Frame Rate:** The video refresh rate per second**.** Setting max is 30 FPS

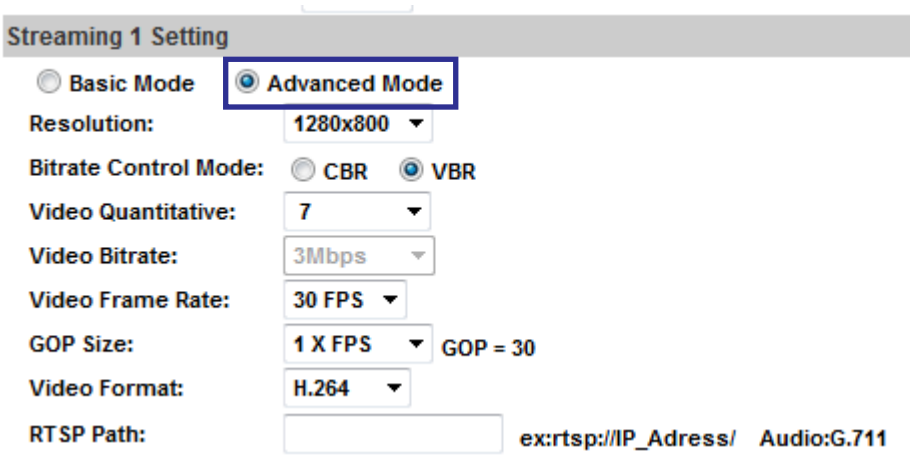
4. **Video Format:** This describes the codec use for compression. H.264 is newer and higher quality, and MJPEG (JPEG) is an older standard

5. **RTSP Path:** RTSP output name.
   For example, if I choose camera, the rtsp path would be as follows: **rtsp://camera/V2**

Video Settings/cont.



Streaming (Advanced Mode):



1. **Resolution:**
   There are 5 resolutions you can choose from.
   1280x800
   1280x720
   640x480
   320x240
   176x144

2. **Bitrate Control mode:**
   There are 2 choices. CBR (Constant Bit Rate) and VBR (Variable Bit Rate)

   A. CBR: 32Kbps-8Mbps (The higher the CBR, the better your video quality will be)
   B. VBR: 1 (Low) to 10 (High) Compression rate. The higher the compression rate the higher the picture quality, and vice versa. The balance between VBR and network bandwidth will affect your picture quality. When using VBR, it is less likely that your streaming video will break up or lag.

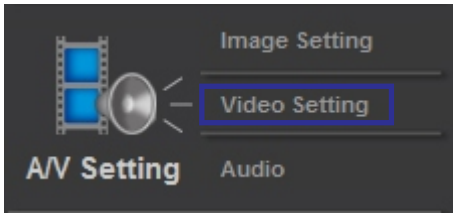
3. **Video Frame Rate:** The video refreshing rate per second
   NTSC: Max 30 frames per second PAL: Max 25 Frames per second

4. **GOP Size:** This means 'Group of Pictures." The higher the GOP is, the better the quality of the images

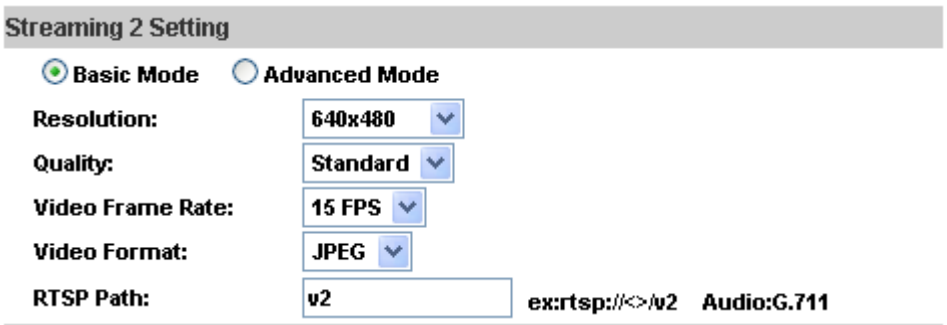
5. **Video Format:** This describes the codec use for compression. H.264 is newer and higher quality, and MJPEG (JPEG) is older, but used in some control systems

6. **RTSP Path:** RTSP output connecting route for example, **rtsp://camera/v1**

Video Settings/cont.



Stream 2 (Basic Mode):



1. **Resolution:**
   There are 5 resolutions you can choose from.
   1280x800
   1280x720
   640x480
   320x240
   176x144

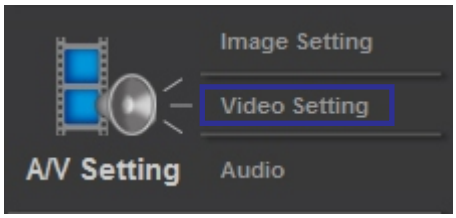
2. **Quality:**
   There are 5 levels you can adjust to:
   Best, High, Standard, Medium, & Low
   If you use the highest settings, the network streaming speed will be slower
   Also, if you record any files, the higher the quality, the larger the file will be

3. **Video Frame Rate:** The video refreshing rate per second

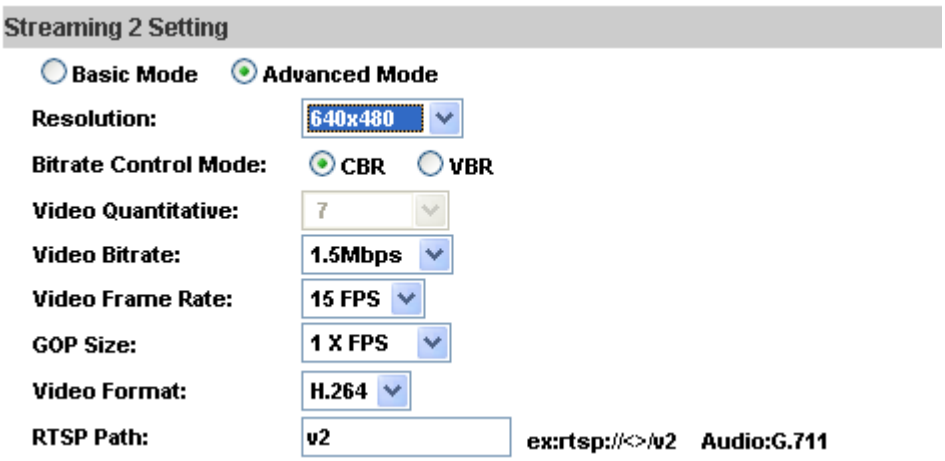
4. **Video Format:** This describes the codec use for compression. H.264 is newer and higher quality, and MJPEG (JPEG) is older

5. **RTSP Path:** RTSP output connecting route
   For example, **rtsp://camera/v2**

Video Settings/cont



Stream 2 Advanced Mode:



1. **Resolution:**
   There are 5 resolutions you can choose from.
   1280x800,1280x720, 640x480, 320x240, & 176x144

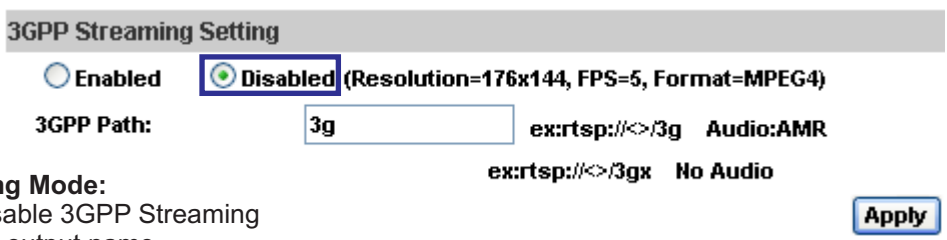
2. **Bitrate Control mode:**
   There are 2 choices. CBR (Constant Bit Rate) and VBR (Variable Bit Rate)

3. **Video Frame Rate:** The video refreshing rate per second.

4. **GOP Size:** This means 'Group of Pictures." The higher the GOP is, the better the quality of the images.

5. **Video Format:** This describes the codec use for compression. H.264 is newer and higher quality, and MJPEG (JPEG) is older.

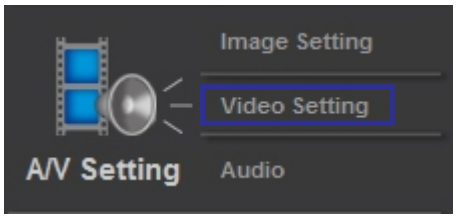
6. **RTSP Path:** RTSP output connecting route.



7. **3GPP Streaming Mode:**
   1. Enable or Disable 3GPP Streaming
   2. 3GPP: 3GPP output name

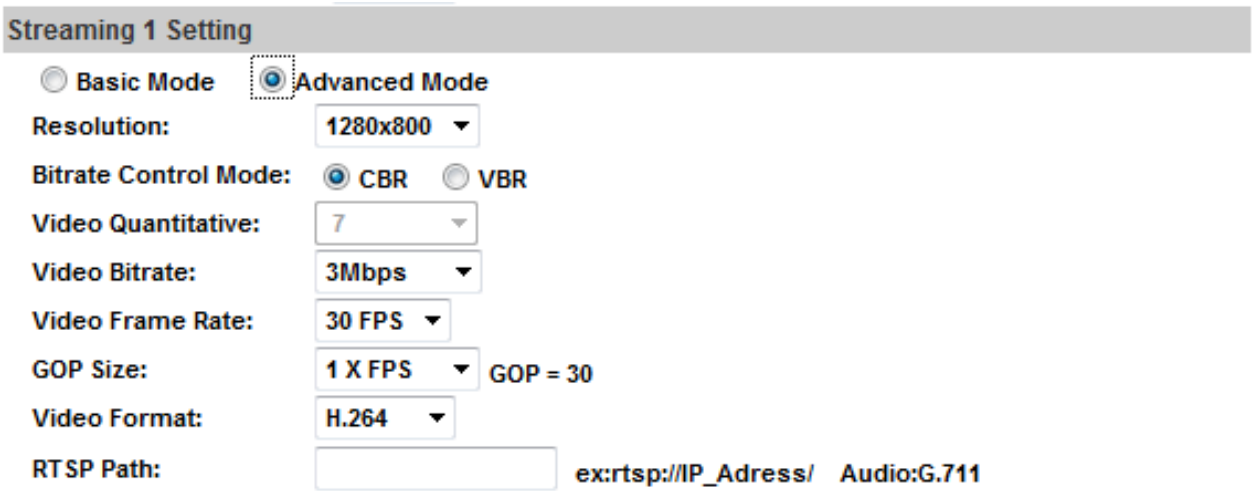
***Channel Vision recommends you use 176x144 resolution, 5FPS, MPEG4 format for 3GPP mode**

Recommended Video Settings

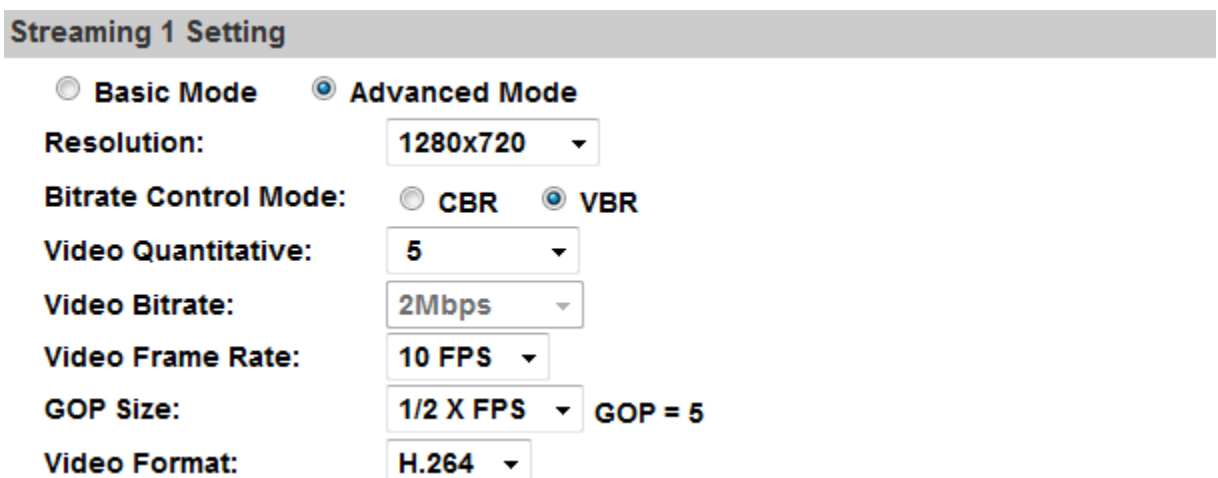


Below are a few examples of recommended settings, depending on the situation.

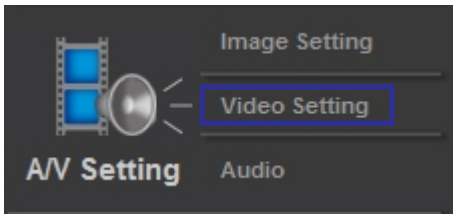
1. **Viewing a stationary object, or area that does not receive much movement**
   If the camera is looking at a stationary object, or an area that does not receive a lot of traffic or movement, the camera can be set to the highest settings. An example of the highest settings are below:



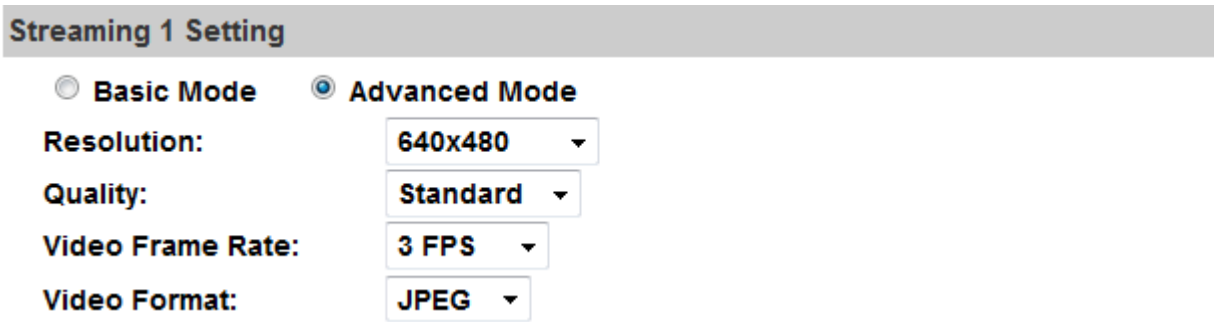
2. **Viewing an area that receives a lot of traffic or movement**
   If the camera is looking at an area that views constant or near constant movement, a medium setting is recommended. An example of medium settings are below:



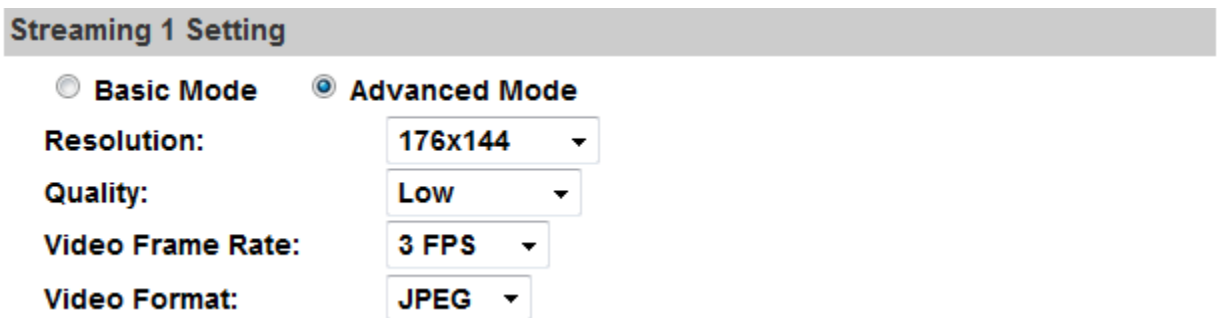
Recommended Video Settings/cont



3. **Viewing on a slow internet connection**
   If the **6544** is installed on a network that does not have a very fast internet connection, or you are viewing on a network with limited bandwidth, the example below is recommended.



4. **Viewing a 6544 on the lowest settings**
   Below is an example of the lowest settings.



Event List

1.) Event Setting: The purpose of this menu is to configure what the camera will do when an "event" is generated.

2.) Motion Detection

The 6544 allows 3 areas of motion detection. (Area Setting) When motion is triggered, they can send the video, in the form of events to a specific mail address, transmit the live video to a remote FTP server, & trigger a relay.

To set up the motion area, click "Area Setting". Use the mouse to click and drag a box of the area you want to select. The same method is used for area 2 and area 3.

.3.) Record File Setting: The 6544 allows 3 different types of recorded files.

A.) AVI File (With time stamp) This is the largest file size option to choose, but the video will be the highest quality available.

B.) JPEG (MJPEG) File (With time stamp) This is a smaller file size to choose, but is of lower quality than the AVI format.

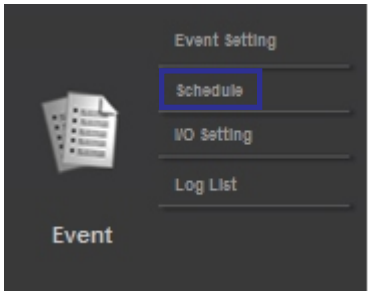
C.) JPEG (MJPEG) Single file with interval setting.

Event List/cont.

4.) Record Time Setting:
Pre Alarm and Post Alarm setups for record start and end time when motion is detected, or to trigger a relay. Note: Pre/Post Alarm record time based on record time setting and IP Camera's built-in memory. The ability to store data is limited, so if the video quality is set very high, this will cause a drop in the recorded FPS. This will also decrease pre or post recording time.

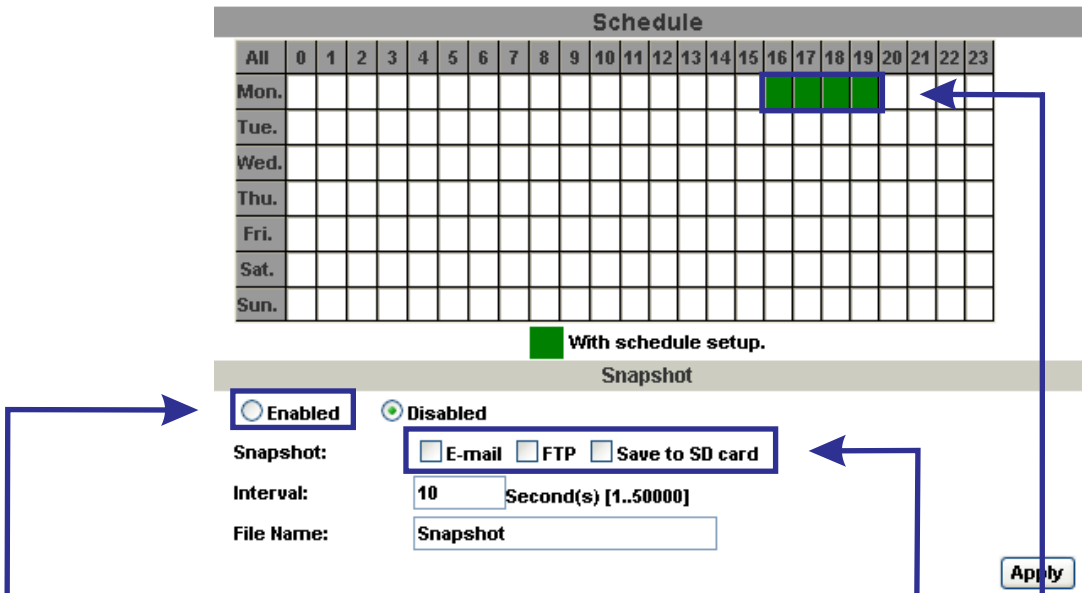
5.) Network IP Check:
This option checks your internet connection (Interval) to make sure your network connection has not been lost.
"IP Check" enables or disables this feature.
"IP Address" is what the camera will use to check if the internet is still working.
"Interval" is how often the camera will test your internet connection.
"IP Check" (lower option) has a box to check.

Schedule



1.) Schedule: Complete schedule setup to tell the IP Camera when to record data.

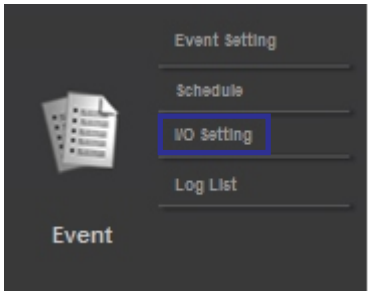
2.) Snapshot: After enabling the snapshot function, user can select the storage location of the snapshot, the time of snapshot, and the file name of snapshot.



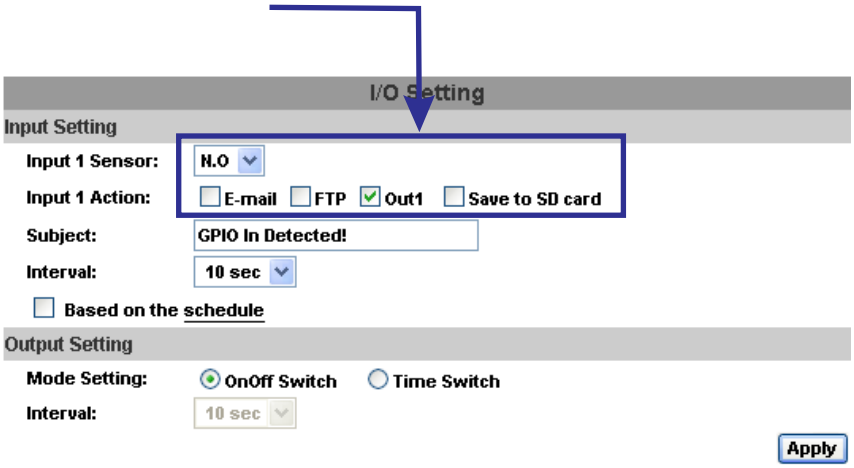
Click “Enabled” to enable snapshot.
Select the E-mail, FTP, or Save to SD card option to enable.

Click the desired areas (boxes) to designate recording time.
Green=record

I/O Setting



I/O Setting:
The 6544 supports 1 input/1 output. When the input is triggered, it can send the video to a specific e-mail address, (only one receiver email is allowed) transmit the video to a remote ftp server, or trigger a relay.

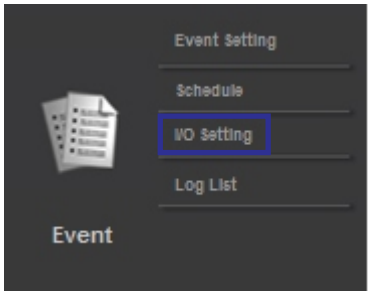


Alarm Input Setting: The GPIO I/O port input activates related functions when I/O input is triggered

GPIO Output Setting: The GPIO I/O port output activates a switch, slide switch or pan/tilt Module for use with any standard relay box

GPIO 0	ALARM INPUT Normal: 3.3V (The voltage differential from GPIO pin & GND) Active: 0V (GPIO 0 & GPIO1 link to PIN2 GND)
GPIO 1	
GPIO 2	ALARM OUTPUT Normal: 3.3V (The voltage differential from GPIO pin & GND) Active: 0V (GPIO 0 & GPIO1 link to PIN2 GND)
GPIO 3	

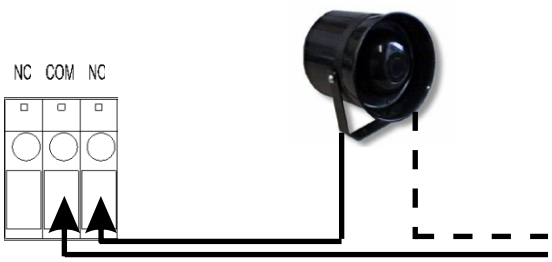
I/O Setting/cont

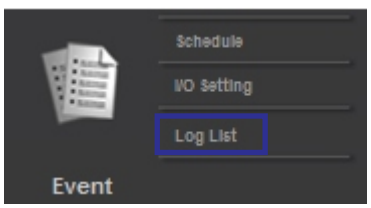


I/O Setting:
The 6544 supports 1 input/1 output. When a input is triggered, it can send the video to a specific e-mail address, transmit the video to remote ftp server, or trigger a relay.

***Maximum voltage allowed is 5vDC 50mA.**

GPIO INSTALLATION EXAMPLE: Floodlight
Trigger a normally off (Normally Open) alarm siren that activates when an event/motion occur at the COM terminal.





Log List

Log List: This menu provides access to the logs the IP camera will create.

Log List
System Logs
Logs
Motion Detection Logs
Logs
I/O Logs
Logs
All Logs
Logs

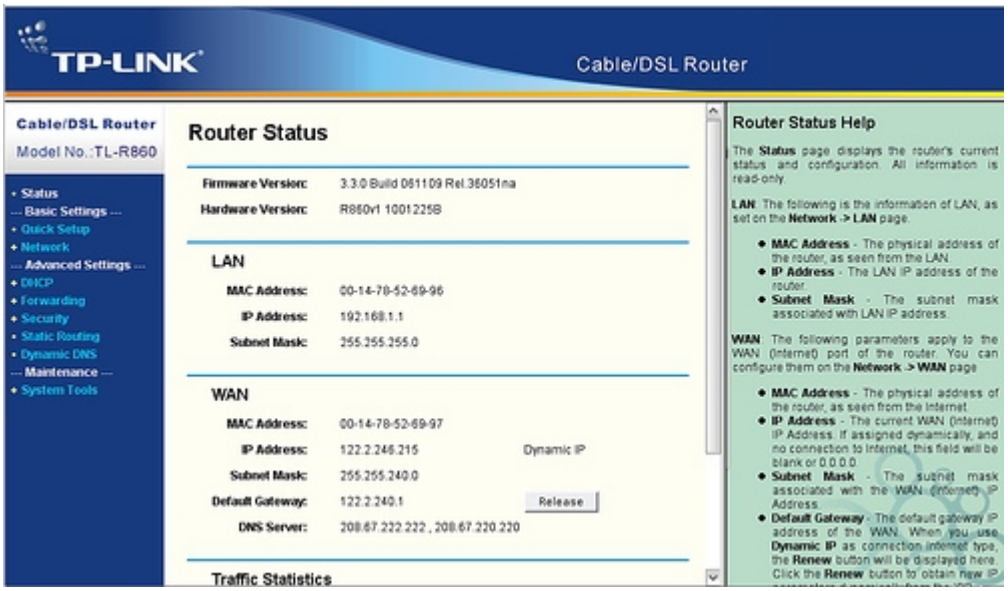
Port Forwarding

In order to view the IP camera from outside of your home or business network, port forwarding configuration will be required in your router.

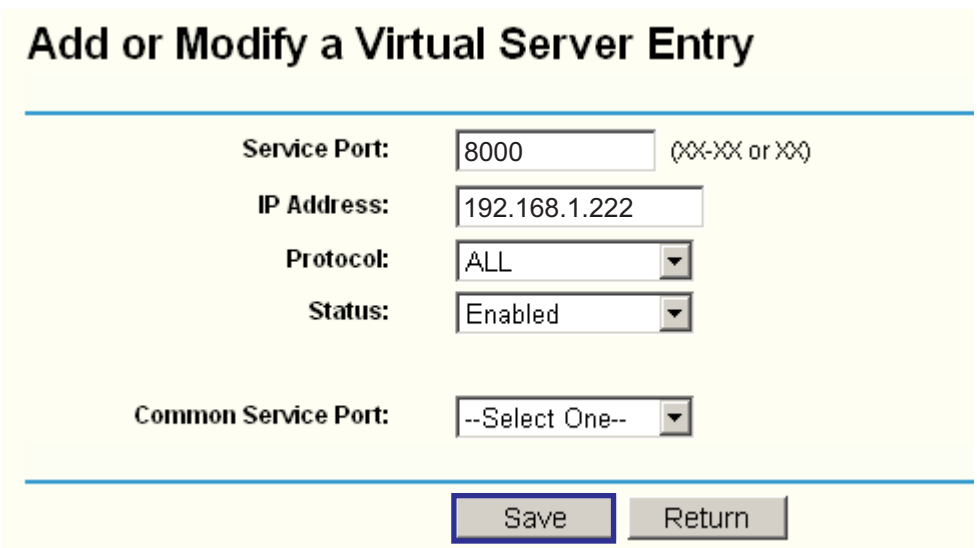
Port Forwarding TP-Link Routers

In the example below, there is a IP camera running on port 8002 on the LAN.

1. Add the IP information, including the desired port into the port forwarding tab of “forwarding” in the router
2. Check “Enable Port Forwarding”

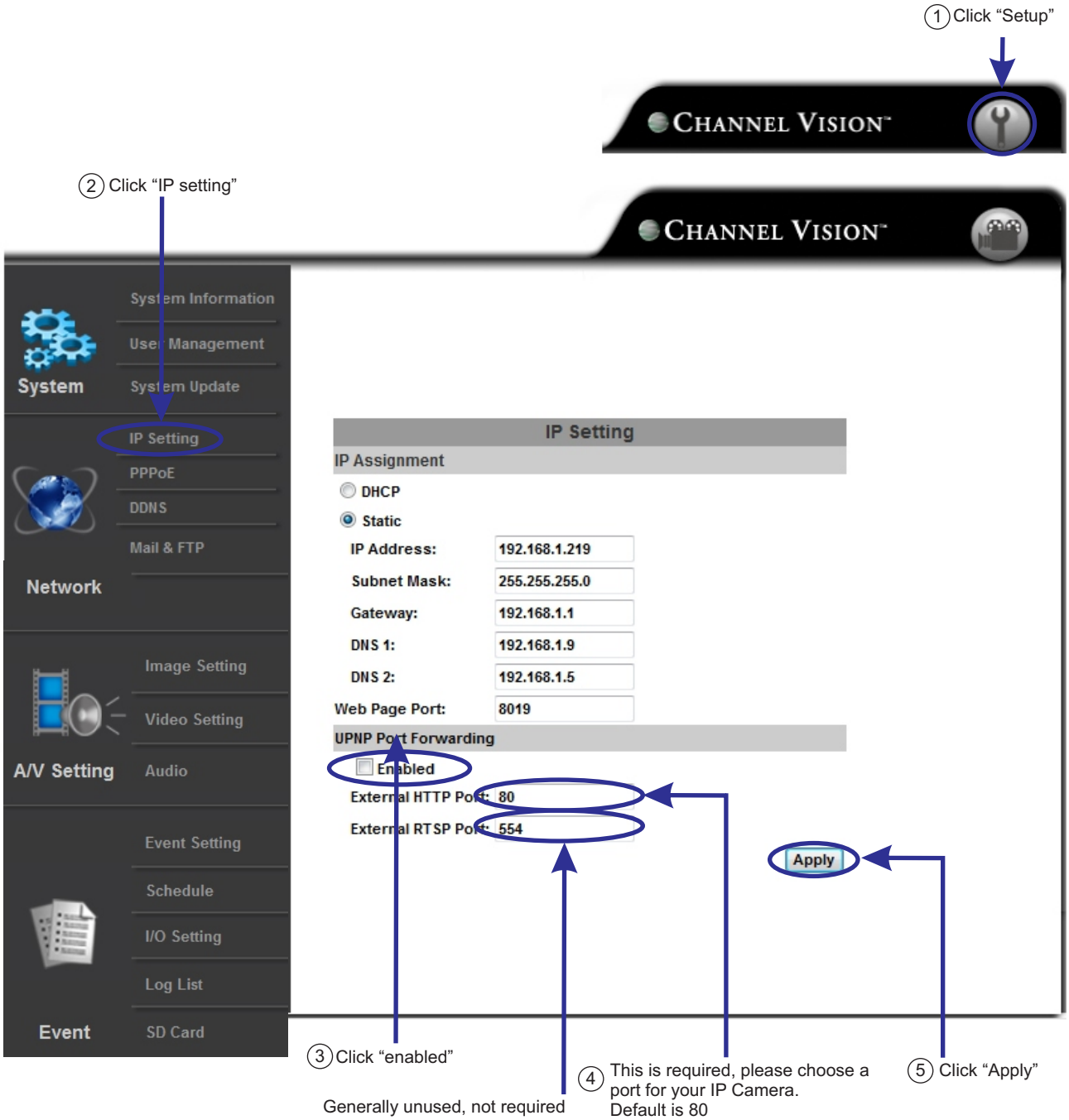

TP-LINK
Cable/DSL Router
Cable/DSL Router
Model No.:TL-R860
Status
--- Basic Settings ---
Quick Setup
Network
--- Advanced Settings ---
DHCP
Forwarding
Security
Static Routing
Dynamic DNS
--- Maintenance ---
System Tools
Router Status
Firmware Version: 3.3.0 Build 061109 Rel.36051na
Hardware Version: R860v1 1001225B
LAN
MAC Address: 00-14-78-52-69-96
IP Address: 192.168.1.1
Subnet Mask: 255.255.255.0
WAN
MAC Address: 00-14-78-52-69-97
IP Address: 122.2.246.215 Dynamic IP
Subnet Mask: 255.255.240.0
Default Gateway: 122.2.240.1 Release
DNS Server: 208.67.222.222 , 208.67.220.220
Traffic Statistics
Router Status Help
The Status page displays the router's current status and configuration. All information is read-only.
LAN: The following is the information of LAN, as set on the Network -> LAN page.
MAC Address - The physical address of the router, as seen from the LAN.
IP Address - The LAN IP address of the router.
Subnet Mask - The subnet mask associated with LAN IP address.
WAN: The following parameters apply to the WAN (Internet) port of the router. You can configure them on the Network -> WAN page.
MAC Address - The physical address of the router, as seen from the Internet.
IP Address - The current WAN (Internet) IP Address. If assigned dynamically, and no connection to Internet, this field will be blank or 0.0.0.0.
Subnet Mask - The subnet mask associated with the WAN (Internet) IP Address.
Default Gateway - The default gateway IP address of the WAN. When you use Dynamic IP as connection internet type, the Renew button will be displayed here. Click the Renew button to obtain new IP

3. Select “Add or Modify a Virtual Server Entry”
4. Select and add “service port” as port of the camera
5. Enter IP address of camera under “IP address
6. Change Protocol to “all”
7. Change status to “enabled”
8. Select “Save” to save changes



UPNP Port Forwarding

In order to view the IP camera from outside of your home or business network, port forwarding configuration will be required in your router.
Alternatively, you can use what is called UpNp, or Universal Plug and Play.
Follow the instructions below to configure the IP Camera for UpNp.
By default, the IP Camera is set to port 80.
This can be changed if needed, but 80 (industry standard for default http server port) but is not required.



Go to **www.channelvision.com** for detailed port forwarding, DDNS service, & Channel Vision iPhone and iPad app.

6544 Specifications

CPU:	ARM 9, 32 bit RISC
RAM:	128MB
Flash:	16MB
Image Sensor:	1/4” Megapixel CMOS sensor
Sensitivity:	1.0 Lux @30FPS (IR off) 0 Lux @30FPS (IR on)
IR Distance:	20 Meters
Shutter Time:	1/5 - 1/10,000 seconds
Lens Type:	Vari-focal 3.3-12mm @F1.4
I/O:	N.O. / N.C.
Power:	12vDC
Power Consumption (DC)	Max 2.52W (IR Off) 4.68W **(**390mA) (IR on)
Operating Temperature:	-10°C - 45°C**;** 14°F-113°F
Dimensions:	3.27”(W) x 5” (L)
Ethernet:	10/100 Base-T
Network Protocol:	IPV6, IPV4, TCP/IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP, Samba, & Bonjour
Max Resolution:	1280x800
Video Resolution:	1280x800, 1280x720, 640x489, 320x240, and 176x144 (30FPS)
Video Adjustments:	Brightness, Contrast, Hue, Saturation, Sharpness, Shutter speed, AGC, Sense-up, D-WDR, Flip, Mirror, Noise Reduction, Day & Night adjustable
Motion Detection:	Yes, 3 different areas
Triggered Action:	Mail, FTP, DO, Samba
Security:	Password protection, IP address filtering, HTTPS encrypted, 802.1x port based authentication for network protection, & QoS/DSCP
IP Rating:	IP66
Motion Detection:	Yes, digital only
Maximum Users:	10
Wireless Mode:	Auto, 11g, 11b, or 11n
Wireless Security:	WEP, WPA-PSK, and WPA2-PSK

System Requirements (Setup)

OS:	Windows XP, 7, or 8 recommended
Browser:	Microsoft IE 6.0 or above
Suggested Hardware:	Intel Dual Core 1.66G,RAM: 1024MB, Graphic card: 128MB

System Requirements (Live Viewing)

OS:	Windows XP, 7, 8, or Macintosh version 10.6 or newer
Browser:	Microsoft IE 6.0 or newer, Safari, Firefox, & Chrome
Suggested Hardware:	Intel Dual Core 1.66G,RAM: 1024MB, Graphic card: 128MB (Windows)

***Specifications subject to change without notice**

CHANNEL VISION™

1 Year Limited Warranty

Channel Vision Technology will repair or replace any defect in material or workmanship which occurs during normal use of this product with new or rebuilt parts, free of charge in the USA, for one year from the date of original purchase. This is a no hassle warranty with no mail in warranty card needed. This warranty does not cover damages in shipment, failures caused by other products not supplied by Channel Vision Technology, or failures due to accident, misuse, abuse, or alteration of the equipment. This warranty is extended only to the original purchaser, and a purchase receipt, invoice, or other proof of original purchase date will be required before warranty repairs are provided.

Mail in service can be obtained during the warranty period by calling (800) 840-0288 toll free. A Return Authorization number must be obtained in advance and can be marked on the outside of the shipping carton.

This warranty gives you specific legal rights and you may have other rights (which vary from state to state). If a problem with this product develops during or after the warranty period, please contact Channel Vision Technology, your dealer or any factory-authorized service center.

Channel Vision products are not intended for use in medical, lifesaving, life sustaining or critical environment applications. Channel Vision customers using or selling Channel Vision products for use in such applications do so at their own risk and agree to fully indemnify Channel Vision for any damages resulting from such improper use or sale.

FC Tested To Comply With FCC Standards CE RoHS

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

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